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TRANSITIONAL PLAN FOR SOCIAL AND ECONOMIC DEVELOPMENT

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REPUBLIC OF BOTSWANA

TRANSITIONAL PLAN FOR SOCIAL AND ECONOMIC DEVELOPMENT

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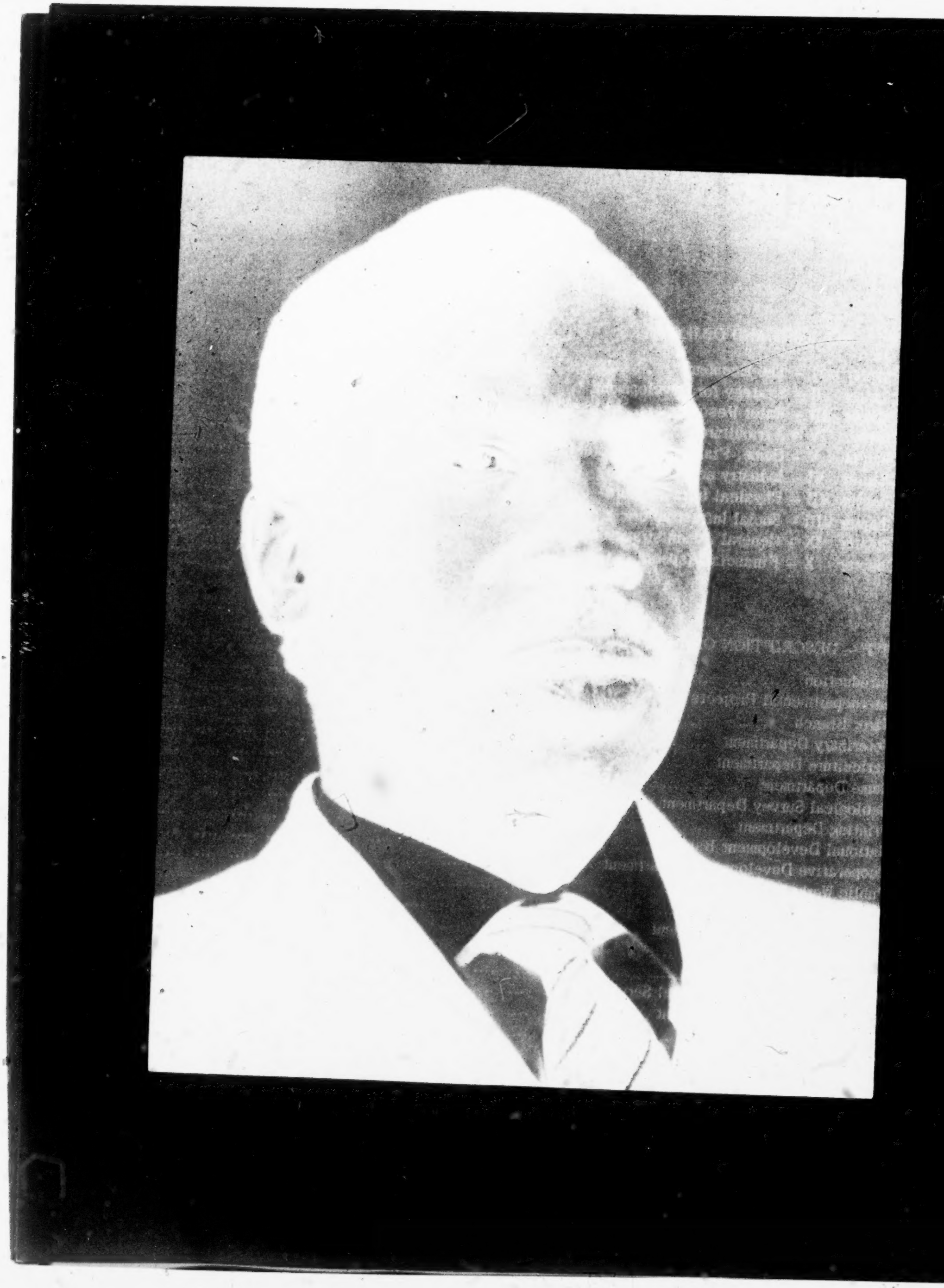
30th September, 1966



Foreword

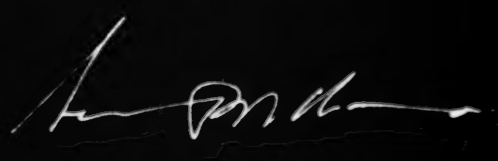
Botswana's need for sound planning is great. Our country is beyond doubt one of the poorest nations in Africa. There are unique development problems; the lack of independent access to the sea, the presence of powerful neighbours whose racial policies differ greatly from those of Botswana, the lack of a national currency, the inability to impose customs tarrifs, and so on. In these circumstances direction and impetus must be given to the economy. Domestic resources must be husbanded and used to the greatest advantage in promoting economic growth, while assistance will be sought from abroad and used to the maximum effectiveness. My Government is aware, too, that planning by itself is not enough, that efficient implementation of the Plan is even more important and pledges itself to this task.

The primary aim of the Government of the new Republic of Botswana will be to take all steps necessary to create a strongly united nation, to overcome all parochial, tribal or racial rivalries and to make clear to the whole world our determination to preserve the territorial integrity and sovereign independence of our country.

My Government will be alert against all forms of racial discrimination and will work to preserve a stable and democratic environment which is essential for economic progress. We shall take steps to strengthen the new institutional structure of our country. In particular the system of Local District Councils will be fostered and encouraged, and the National Development Bank will be made into an effective credit institution designed to assist local producers who show initiative.

Five years ago the populated areas of the Bechuanaland Protectorate consisted mainly of a number of tribal reserves. Political parties had not been formed. The country was administered by a colonial Central Government staffed largely by expatriates. Its capital was situated in the Republic of South Africa. This situation has changed dramatically, and the political advancement of the people has been rapid.

The energies of the nation must now be devoted to the economic and social development of the country. The Transitional Plan sets out in much detail what has to be done. Every Motswana must play his part.



Sir Seretse Khama
President

ıtroduction

ackground:

In 1963 the Protectorate Government published five-year development programme based on the kely availability of development finance. Since ıen the rapid constitutional advance of the terri- ory has created an entirely new situation. In une, 1965 a Mission visited the Protectorate on ehalt of the United Nations. this Mission's teport made numerous recommendations relating o the economic development of the country de- nonstrating the need for substantial financial ınd technical assistance. In November, 1965 he British Ministry of Overseas Development, sent out an Economic Survey Mission under the eadership of Mr. R. S. Porter to investigate Botswana's financial situation.

2. Other recent surveys include a report on educational needs undertaken by a UNESCO Mission and a survey of wild life and fauna sponsored jointly by the International Union for the Conservation of Nature and Natural Resources and the UN Food and Agriculture Organisation. In addition the Government has itself completed a variety of reconnaissance surveys on different aspects of the economy. The development programme outlined in this document represents the policies and projects decided upon in the light of the technical advice distilled from these numerous reports and in the light of the declared goals and objectives of the Democratic Party Government.

Planning Machinery:

3. An Economic Planning Unit (E.P.U.) has been established under the Ministry of Finance. A newly created Central Statistical Office is attached to the E.P.U. To provide a channel of communication with non-governmental institutions and associations, a National Economic Advisory Council consisting of representatives of both Government and private bodies is to be formed. In addition, in order to ensure the maximum co-ordination in the formulation of Government policy the Cabinet is assisted by an economic committee formed from its members for which the E.P.U. acts as a secretariat.

4. This Transitional Plan was prepared by the Economic Planning Unit of the Ministry of Finance in cooperation with all Government Departments and a number of non-governmental bodies.

5. A major obstacle to initiating comprehensive resource planning is the almost total absence of reliable statistics. It is anticipated that within a year the Central Statistical Office will have completed the first set of national income accounts. It is intended to publish an annual abstract of statistics and a preliminary version is expected before the end of 1966.

The Transitional Plan:

6. The present Plan is transitional in two senses. Firstly, it bridges the period of constitutional transition from internal self-rule to full independence. Secondly, it covers the period of change from the rudimentary planning represented by the colonial public expenditure programme to full resource planning which the Government intends to introduce. A comprehensive Five-Year Development Plan will be prepared by the end of 1967.

7. The Transitional Plan is comprised of projects to be undertaken in the three year period 1966/69. For these projects the phasing of expenditure is given for the five year period 1966/71. Projections of recurrent revenue and expenditure are given for the same five year period. The chapters dealing with the sectoral plans do not include a list of development projects; these details are given in Part II of the Plan where each project is briefly described.

PART I

Policies and Objectives

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Chapter I—The Economy

Physical Features:

8. The principal features of Botswana are its physical size, aridity and low density of population. With almost the same area as Kenya, it mainly comprises a vast dry tableland with an annual rainfall varying from 12 to 19 inches. The country is entirely landlocked, bounded by Rhodesia, South Africa, South West Africa, the Caprivi Strip and Zambia. The main supply route is the railway line joining Bulawayo in Rhodesia to Mafeking in South Africa; the line of rail runs north-south through eastern Botswana where over 80 per cent of the population lives.

9. The east of the country is broken by a series of rocky hills and in the north is widely covered by mopane bush. The rainfall is sufficient to produce good pasturage and this fact, combined with the presence of underground water, makes eastern Botswana an excellent cattle rearing region. In addition the rainfall is normally sufficient to permit arable farming; the main crop is grain sorghum but rainfed maize, beans and other crops are also grown successfully, especially in the south.

10. The Kalahari Desert occupies a great expanse in the centre and the south of the country. The sand veld is closely covered with thorn bush and grass; surface water is absent except in occasional clay floored depressions known as pans. Where permanent supplies of water can be obtained from boreholes cattle ranching is possible. This is particularly true on the Ghanzi plateau in the west where a number of freehold farms have been established. For the most part the Kalahari is inhabited only by bands of shy Bushmen.

11. In the north-western corner of Botswana, called Ngamiland, the Okavango River forms a swampy delta covering 6,500 square miles. It is estimated that the average inflow of water from Angola is 9,000 cusecs, representing a vast untapped water resource. Although part of the Okavango Swamp is tsetse infested, it is estimated that some 50,000 acres would be suitable for irrigation farming if the water flow could be controlled. The swamps support great herds of buffalo, hippopotami and other wild animals which together with the game in the Kalahari and Northern Botswana represent Africa's largest reservoir of wild animals and constitute an important tourist attraction.

12. In Northern Botswana the Kalahari gives way to belts of indigenous forest and dense bush sustained by the higher rainfall of the region. Valuable stands of hard wood cover extensive areas. The availability of ground water resources, and the existence of suitable soil and reliable rainfall in the north-eastern corner of the region indicate favourable development potential. To the south of this area lies the Makarikari depression, a vast salt pan containing valuable brine deposits.

13. The climate of Botswana is tropical, subtropical and temperate depending on the region. Summers, the rainy season, are hot although tempered at times by north-eastern breezes; winters are dry with wide diurnal temperature variations, occationally giving rise to frosts.

Population and Employment:

14. A census of population held in 1964 showed that the country's total inhabitants numbered 543,105, comprising 535,275 Africans, 3,921 Europeans, 3,489 persons of mixed race, 382 Asians and 38 others. Overall population density is 2.5 persons per square mile.

15. The majority of the population has a pastoral and agricultural existence, living in central villages, the largest being Serowe (34,000), Kanye (34,000) and Molepolole (30,000). The main business centres are the capital Gaberones (estimated population 12,000), Lobatsi (8,000) and Francistown (10,000), all situated along the line of rail.

16. The 1964 population census shows that the following numbers of workers were employed in the following occupations: —

Activity	*Number of Workers*
Agriculture, Forestry, Hunting and Fishing	227,649
Mining and Quarrying	1,940
Manufacturing	2,420
Construction	2,704
Electricity, Water Services	120
Commerce	2,468
Transport &Communication	2,315
Services	9,798
Ill-defined activities	1,264
Total	250,678

17. The total wage bill for 1965 is estimated to be approximately R9 million. In addition, during 1965, 32,319 men left the country to work on the South African mines bringing back into the country over one million rand.

Land Utilisation and Tenure:

18. Botswana is divided into eight tribal territories (107,497 square miles), six freehold farming blocks mainly occupied by Europeans (8,242 square miles) and State Lands (104,497 square miles) which are largely uninhabited sand veld but include the Central Kalahari Bushman Reserve.

19. Land in each Tribal Territory is vested in the Chief and the Tribe and is allocated to individuals by the Chief. Every member of a tribe has the right to the use of land. Land may not be alienated by the Chief or Tribe without Government approval. There is no written title to land which could be used as security for loans.

20. The cultivated tribal lands usually start a few miles from the villages and in the case of larger villages may stretch in any direction up to thirty miles. These "lands" are normally concentrated in one or more places, but often in arid areas are widely scattered. Around and beyond the "lands" lie the cattle posts; these are either at boreholes or at wells dug in the sands of ephemeral rivers. Each cattle owning family maintains a post which may be shared with other members of the extended family. Small cattle-owners are encouraged to form syndicates to raise sufficient funds to pay for boreholes. Traditionally grazing areas are unfenced and may be used by any member of the tribe passing through the area.

21. It is estimated that there are 8½ million acres of land suitable for cultivation in eastern Botswana; of these only one million acres are under cultivation or recent fallow; some 600,000 acres are considered to be potentially irrigable. Most of the remainder of the country offers good grazing; the national herd, although reduced by one-third as a result of the recent drought, is estimated to number just under one million head. The carrying capacity of the country is believed to be over 2½ million head provided sufficient watering points can be created.

Mineral Resources:

22. In 1965 asbestos and manganese valued at R217,000 or approximately 2% of the total value of exports. were mined, but at present no mine is operating in Botswana. However mineral prospecting is being undertaken in a number of areas and results to date indicate that ore bodies will be proved which will warrant commercial exploitation. In addition a search for oil is being conducted in southern Botswana.

23 Roan Selection Trust, through its subsidiary, Bamangwato Concessions Limited, has conducted regional geochemical surveys which have already led to the discovery of two commercially significant deposits, one at Matsitama, 53 miles west of Francistown and another at Sedibe, 43 miles south east of Shashi Siding. It is anticipated that a good estimate of the economic importance of these deposits will be available within a year. In addition to the copper, Roan Selection Trust have shown an interest in extracting salt and soda ash from brine deposits in the Makarikari region west of Francistown. It is technically possible to produce 60,000 tons of soda ash and 140,000 tons of salt per annum but so far suitable markets for this output have not been found.

24. Detailed investigation of the area around Mamabula railway siding has revealed two principal seams of medium grade non-coking bituminous steam coal. The proved reserves exceed 400 million tons. Another coalfield lies some 6 miles west of Palapye at Morapule with proved reserves of coal down to a depth of 450 feet of the order of 150 million tons.

25. Potential fireclays and industrial ceramic materials have been identified in the Mamabula area. Results of tests show that mudstones have a compressive strength reaching those of the standards set for engineering class bricks. Deposits of calcretes are also present in the Mamabula area which may be suitable for cement making; it is possible that the limestone present may be developed for agricultural purposes.

26. An occurrence of pistolitic iron ore in the Chadibe area has been the subject of preliminary investigations. Although the ore is of low grade (average 30–35% metallic ore) with a high silica content, the potential reserves appear very large. In the same area extensive deposits of low grade manganiferous sandstone have been located. Investigations are still in progress on these mineral occurrences. Finally, Anglo American Corporation of South Africa, through their subsidiary Kimberlitic Searches Ltd. are undertaking diamond exploration work in eastern Botswana.

National Income:

27. As yet there are no published national income accounts for Botswana; the systematic collection of economic statistics has only recently been started with the establishment of a Central Statistical Office staffed by two professional statisticians. The gross domestic product is tentatively estimated at R25 million giving a per capita income of between R45 and R50; this places Botswana amongst the poorest countries in Africa. During the severe drought of 1965/66 the number of persons receiving famine relief food totalled over 100,000 or one fifth of the population. The crops failed almost entirely and cash incomes were diverted to the purchase of food supplies from other less essential consumer items. However the drought also caused a record offtake of 160,000 head from the national herd realising R9.7 million in total livestock products, greatly boosting rural incomes. At the same time a record number of men (32,319) offered themselves for work on the South African mines, also contributing a flow of cash into the Botswana economy.

Trade:

28. Botswana is joined to the Republic of South Africa in a Customs Union Agreement under which Botswana receives about 0.3% of customs and excise revenue (excluding that derived from South African manufactured beer, wines and spirits) collected by the South African authorities. As a result of the existence of the customs agreement with the Republic of South Africa, goods move freely between the two countries and no records of imports and exports have been kept. Estimates of external trade flows have been made, partly by means of questionnaires.

29. Tables I and II* give details of Botswana's principal imports and exports. The export figures omit an item for invisible earnings represented by the grants and loans received by the Government from external sources; in 1965/66 these invisible earnings totalled R9.8m. The dependence of the country on the earnings of the livestock industry is clearly evident from the export figures. This is particularly true in 1966 since all mining has ceased.

30. The statistics for imports show the value of goods imported from Rhodesia and South Africa. However the figures do not indicate the primary source of origin. It is estimated that a high percentage of imports are South African manufactures which are able to compete successfully with overseas manufactures, in some cases as a result of protective tariffs. The successive years of drought have necessitated large imports of basic foodstuffs such as maize and sorghum. In years of good rainfall Botswana becomes a net exporter of sorghum, no less than 176,000 bags having been exported in 1961.

31. In the marketing of agricultural crops Botswana is in close liason with the South African Dairy Industry Control Board, the Mealie Industry Control Board and the Oil Seeds Board, which guarantee markets for these commodities at favourable prices.

*(*See page 4)*

Table I – Estimated Exports of Botswana

	1963 Value R	*1964 Value R*	*1965 Value R*
Cattle (live)	1,116,787	640,000	838,000
Cattle (carcases)	4,565,956	4,772,000	5,802,000
Other animals (sheep, goats, etc.)	43,258	45,000	54,000
Hides and skins (domestic animals)	460,676	488,000	658,000
Skins, trophies, dried meat, ivory, karosses (wild animals)	45,634	95,000	139,000
Canned meat	–	810,000	753,000
Meat extract	–	182,000	432,000
Abattoir by-products	804,481	261,000	369,000
Bonemeal	117,510	113,000	184,000
Butter and butterfat	96,764	57,000	39,000
Other animal products	172,156	351,000	411,000
Asbestos	219,030	258,000	185,300
Manganese	145,886	89,000	32,000
Gold	3,490	200	700
Citrus	35,000	4,000	4,000
Groundnuts	145,990	185,000	2,000
Cotton	18,930	44,000	221,000
Other agricultural produce	43,909	50,000	50,000
Labour (Deferred Pay and remittances)	762,000	837,000	1,146,000
Total	**R8,797,457**	**9,281,200**	**11,320,000**

Table II – Estimated Imports of Botswana (1965)

	South Africa R	*Rhodesia R*	*Other R*	*Total R*
Food and Non-alcoholic Beverages	3,669,400	465,800	25,000	4,160,200
Alcoholic Beverages and Tobacco	247,000	325,000	10,000	582,000
Livestock and Livestock Feed	313,700	7,200	600	321,500
Clothing and Textiles	1,550,000	781,000	19,000	2,350,000
Building Materials	793,500	1,240,400	1,100	2,035,000
Machinery and Equipment	3,188,300	178,700	44,000	3,411,000
Fuels, Chemicals and Drugs	1,540,500	521,800	2,000	2,064,300
Miscellaneous	1,513,200	131,300	22,500	1,667,000
Total	**R12,815,600**	**3,651,200**	**124,200**	**16,591,000**

Note: Part of the imports from the Republic of South Africa are in fact re-exports rather than South African manufactured goods.

Financial Institutions:

32. Botswana participates in a joint monetary system with South Africa, the Rand being legal tender in the country. This arrangement eliminates any international payments disequilibria, these being absorbed by the Southern African banking system, and assures the country of a stable and internationally recognised currency. However it has the disadvantage of making Botswana subject tomonetary and credit policies over which it has no control. This difficulty has been partly circumvented by establishing a Botswana National Development Bank capable of supplementing the credit facilities provided by the two commercial banks operating within the country.

33. The National Development Bank was established in 1964 for the purpose of promoting the economic development of the country with priority being given to agricultural credit for African farmers, cooperative credit and loans for local business ventures. Its impact has been limited so far due to a shortage of capital. In future it is intended that part of the funds raised through the Post Office savings scheme will be invested in the Bank.

34. Standard Bank and Barclays Bank D.C.O. operate in Botswana maintaining eight branches and twenty-six weekly agencies. Their credit policy is subject to overall control by the South African Reserve Bank.

The Drought:

35. Botswana is now experiencing the most calamitous drought in living memory. Its end is not in sight. No one yet knows how many cattle have died, but it is reliably estimated that the national herd has been reduced by over one-third and that the losses in some areas have exceeded 50 per cent. More particularly, a whole year's crop of calves have been lost, and it is calculated that it will need some five years for full recovery to take place. It is possible that the rains will fail again in 1966/67, but even if the cycle of drought years has ended, another cycle will start within a few years. The present drought has brought with it famine, making one-fifth of the population dependant on international famine relief assistance. Furthermore, in numerous areas the vegetation has been entirely grazed away; permanent destruction to the veld due to soil erosion is occurring in many places.

36. The immediate financial implications of the drought are considerable. Heavy expenditure totalling over R2 million – or some 20% of the total recurrent budget and over 40% of the internally generated Government revenue – is being spent on drought and famine relief and rehabilitation measures.

37. Since cattle exports are the mainstay of the economy, the inevitable drop in the offtake over the next few years will mean an estimated loss in Government revenue of over R½ million per year, and a loss in terms of national income of, perhaps, R8 million,-equivalent to over 15% of the Gross National Product.

38. Although a number of immediate drought relief measures have been attempted it is generally true to say that, with the shortage of experienced staff and the human obstacles to emergency action arising from the traditional social system, it is very difficult for the Government to lessen the severity of the drought. In the short term, the people can be fed through the "Food for Work" programme and, employing very costly measures, a few of the cattle saved. The long term effects will be that a large number of families having lost all their cattle, deprived of their livelihoods and unable to plough their lands, will drift to the main centres in search of work. The development of the country is therefore that much more urgent.

Chapter II—Strategy for Development

The Need to Plan:

39. The Botswana Government wishes to stress its belief in the necessity of planning the social and economic development of the nation. The available resources are so small and the problems so great, that only by careful planning can these resources be put to their most effective use. A rationally planned and guided economy is the objective of Government policy. However a balance must be struck where private initiative has ample scope within the general confines laid down by Government. It is Government's duty to set forth clearly its objectives and priorities, to frame its policies accordingly, and to assist the private sector in every way consistent with the attainment of these goals.

40. Any national plan, if it is to secure the support of the people, and the sympathy and assistance of other nations, should state clearly the priorities which will guide both the recurrent and capital expenditure of the Government. These rational objectives and priorities are set forth below and are the result of the most careful consideration by the Government of Botswana.

41. The present Transitional Plan is designed to guide the economic and social development of Botswana during the two year period following independence. In this interim period, a comprehensive Five Year Plan will be prepared. But this Plan has a further basic objective; to describe briefly the development projects which will be sponsored, it is hoped, by nations economically more fortunate than Botswana.

General Economic and Social Objectives:

42. In the absence of national income statistics it is not meaningful to talk about raising the per capita income five or ten per cent per annum; instead, in this Transitional Plan, the development proposed is measured in real terms – more secondary education, more agricultural demonstrators, improved water supplies, new industries, and so forth.

43. Botswana is a poor country not only in terms of per capita income but also in terms of natural resources. Yet those resources which are available are largely unexploited. Wide areas of grazing have yet to be opened up, the crop and animal husbandry techniques practised by the majority remain primitive. Serious mineral and oil exploration has only recently begun despite good indications that there are ore bodies of great economic importance remaining unexploited. To date little industrial development has occurred, but if adequate supplies of water and power can be made available near the line of rail there is little reason why Botswana manufacturers should not compete in the large South African market as successfully as some Rhodesian firms, as well as sell products in markets to the north normally closed to South African companies.

44. Botswana is an enormous country sparsely inhabited. For the purpose of good government and security, it is necessary to maintain an administrative super-structure costing, in per capita terms, vastly more than in most other countries. There is an extensive network of roads to be maintained linking the capital to the remotest villages. The cost per head of water supplies and other basic services are high compared to more favoured countries. In addition the quality of these essential services are inevitably lower than in more densely populated territories.

45. Fundamental to the plans and policies of the Government is a determination to make the country a financially viable entity in the shortest possible period. No politically independent nation can or should depend for any lengthy and continued period on grants to meet ordinary recurrent expenditure on existing services. Such is the plight of Botswana now and for some time to come. But the Government intends that the affairs of the country will be handled in such a way as

to expedite the reduction of dependence on foreign assistance for ordinary budget purposes.

46. However even on the most optimistic projections, and assuming that funds for development are forthcoming as requested, it does not appear possible for Botswana's dependence on grants-in-aid for recurrent expenditure to be ended for a long time to come unless the pace of development is much accelerated.

47. Since the revenue raised internally at present by Government cannot cover even half the cost of existing services, Botswana is heavily dependent on external assistance. There are almost no local funds to be spent on development even though it is intended that all inessential public expenditure will be rigorously restrained and all waste avoided. The projects proposed in this Plan can only be implemented if the finance for both capital and recurrent expenditure is provided by richer countries, although every endeavour will be made to meet as much as possible of the recurrent costs generated by development.

48. Development which can take place with little outside aid is that based on self-help – the construction of rural roads, small dams, and buildings using local materials – and these activities are already and will continue to be encouraged energetically by the Government.

49. A more equitable distribution of income among the people is a long range objective of Government policy. The immediate goal is to increase the number of job opportunities within the country. Although it is possible at present for Batswana to find employment on the South African mines, this situation is unlikely to continue indefinitely. The Government, has however, no intention of interfering with this flow of labour to the Rand: on the contrary it recognises that the mines offer vitally needed employment to men who would otherwise be destitute.

50. In health and social services, it has not been possible to assign the priority truly wished. The Government is aware of the widespread desire for better medical services, but the stringent financial situation necessitates reliance on foreign aid for any improvements in this field.

Private Enterprise:

51. Implicit in the plans and policies of the Botswana Government is a belief in the capacity of this country to effectively absorb capital investment funds. The building of the new capital from nothing more than a minor village to a capital of which every citizen may be justly proud, in a space of three years is an illustration of what can be done. Because the shortage of funds is so great, the Government looks not only to other Governments, but also to private investors for the finance required to develop the country.

52. The expansion of the industrial base – presently very small – is a prime objective of Government policy. Botswana has duty-free access to surrounding countries, an advantage to be fully exploited if industrial development is to occur. In order to attract private investment the Government is considering the establishment of a Botswana Development Corporation (B.D.C.) to be financed with loan capital from the National Development Bank and from funds obtained from other sources. The B.D.C. will be willing to enter into joint partnerships with private investors or to assist them in various other ways.

53. Private enterprise will only be interested in investing in Botswana if there is a profit to be made, if they are assured of a stable and friendly environment and if they are allowed to export their profits if they wish to do so. These conditions the Government accepts. In order to make this quite clear and to create added incentives, the Government will devise fiscal reliefs for new investors and is prepared to examine sympathetically any specific proposals investors may choose to make. The Government's policy will be, in the case of every proposal, to examine the balance of advantages to Botswana; the costs and benefits will be studied, and decisions made on that basis alone.

54. This does not affect the Government's intention also to expand cooperative activities both in commerce and in agriculture. There is room for all; the economy must be developed by every means.

55. Capital is sought for the National Development Bank to enable it to provide credit for new

businesses. It is hoped that some funds may be available to assist foreign investors, although the policy of the Bank will be to give preference to local businessmen.

56. Development of the minerals industry could transform the Botswana economy. In the past public policy has favoured mineral development being undertaken by large private enterprises, with Government assistance for the infrastructural requirements. No change is anticipated in this policy and existing concessions will not be disturbed unless public detriment is evident. The concessionaires are expected to carry out all necessary exploration as rapidly as possible and to exploit any mineral discoveries without delay.

Education :

57. The Report of the British Economic Survey Mission drew attention to the poor state of education in Botswana, and the serious consequences this has for the localisation of the civil service, and for the economic, social and cultural development of the country. The primary schools are overcrowded, lack many essential facilities and are staffed by teachers over half of whom are untrained. The secondary school system produced only sixteen students in 1965 capable of undertaking higher education. The total stock of Batswana holding degrees is only about 40.

58. A study of the economic problems of Botswana reveals that a major obstacle to development is the shortage of school certificate and junior certificate holders. Whilst it is possible, but more costly, to employ expatriates in senior administrative and professional posts the intermediate, junior executive and sub-professional posts can only be filled from local sources. The efficiency of private firms and government administration is as much dependent on the availability of trained clerks, typists, machine operators, et cetera, as it is on good senior officers. Candidates will be required for the Agricultural Demonstrator Training College, for the Teacher Training Colleges, for training as assistant cooperative officers and as community development workers; each sector of the economy requires its quota of manpower with secondary education qualifications. The secondary education system must be geared to meet these needs.

59. Because of the long neglect of secondary education and the acute shortage of trained manpower, the Botswana Government considers that expenditure on the expansion of secondary education must be given top priority in the development programme. The target is to achieve self-sufficiency in high level manpower within twenty-five years. To reach this target it will be necessary both to increase the intake of the secondary schools and to reduce the wastage rate. The immediate aim is to improve the nine existing secondary schools sufficiently to enable them to produce as soon as possible a minimum annual output of 250 school certificate passes.

Water Resources :

60. The present drought has provided a brutal demonstration of the country's vulnerability resulting from inadequately developed water resources. The critical importance of the conservation and rational exploitation of Botswana's water resources is thus self-evident. The country is forced to spend considerable sums each year in search of water; development is therefore more costly and more difficult than in countries better endowed in this respect. In these circumstances the improvement of water supplies must necessarily have high priority in the development programme. The importance of the systematic collection of hydrological data has been recognised by the Government in its application now before the UN Special Fund for assistance in the preparation of a comprehensive plan for the development of irrigable land and water resources in the Okavango River Drainage System and in the Limpopo River Watershed. In addition to establishing a national Hydrological Service, the project involves detailed pre-investment surveys of sites thought suitable for irrigation.

61. Dry-land arable farming in most parts of Botswana is a hazardous, marginal activity. Even the best farmers can obtain only subsistence crops in years of drought. Only by expanding the

acres under irrigation will it be possible to assure the country of its food supplies under all conditions. Irrigation farming offers the best way of increasing the production of cash crops, thereby reducing the economy's dependence on the livestock industry.

62. Increased output of the livestock industry – the country's major productive sector – depends greatly on opening up new grazing areas through the improvement of water supplies and associating with this improvement a concentrated impact of extension services and the development of the educational system. In the first instance this means continuing the exploration of underground water supplies undertaken by the Geological Survey Department and providing loan capital, through the National Development Bank, for repayment boreholes. It is also planned to construct small stock-dams on the headwaters of the tributaries of the Limpopo River.

Agricultural Extension Service:

63. The success of Botswana's Pupil Farmer Scheme has shown that investment in the training of agricultural demonstrators is very worthwhile. The Government therefore places great emphasis on expanding the agricultural extension services and introducing mobile animal husbandry teams. It is, of course, important to back up the field work with reliable research, and provision has been made in the Plan for this.

64. Although it is highly desirable to seek ways of reducing the economy's dependence on the agricultural sector, it will be nevertheless necessary to look to this sector in the immediate future for the main increases in the national income. The standard of living in the rural areas can be enormously improved through the introduction of better arable farming and animal husbandry techniques.

Shashi Complex:

65. The Shashi Complex is the one major development scheme at present envisaged capable of making a dramatic impact on the economy. The development of copper mining at Matsitama and possibly at Sedibe, the industrial development at Francistown and Shashi Siding when ample water and power supplies are made available, the irrigation of a larger area of arid land, and the possibility in time of the production of salt and soda ash at Sua, will transform an entire region of the country. It is for these reasons that such a large proportion of the development expenditure in this Plan is to be devoted to it.

66. The Shashi Complex involves the construction of a large dam at Shashi Siding to supply water not only to the mines but also to Francistown and Shashi Siding for industrial and domestic purposes, and in addition for the irrigation of some 4,000 acres of land; a power station will be erected, and roads and services installed. The availability of reliable supplies of power, water and other basic infrastructure is a prerequisite for copper mining and should attract other private companies to set up various new manufacturing industries.

67. Although the final decision as to whether copper mining is feasible will not be possible until further exploration and investigations have been completed, available evidence indicates that the prospects are encouraging. Various pre-investment studies of the infrastructure are now required and the Government is convinced that these should be undertaken without delay.

External Economic Relations:

68. The nature of Botswana's existing economic relations, its geographical position, as well as the size of the country, calls for a policy of maintaining friendly relations with as many countries of the world as are well disposed towards Botswana. To Botswana's neighbours, the Government will observe a policy of good neighbourliness, except that in all international relations the policy shall always be that of placing the interests and welfare of Botswana first and yet allowing reason, not sentiment to determine the Government's attitude and conduct towards other nations.

69. It has been explained in Chapter I that Botswana is linked to the Republic of South Africa by a Customs Union and a joint monetary system.

The present arrangements have both advantages and disadvantages for the economic welfare of Botswana.

70. The Customs Agreement, whilst relieving Botswana of the burden of costly customs administration, means that the increase in revenue accruing to the Exchequer from this source is not related to the growth in economic activity within the country. The actual tariffs levied are determined by South African interests. High protective duties imposed to protect South African industry tend to diminish the total revenue collected and therefore that part accruing to the Botswana Exchequer. In such cases the diversion of consumers from cheaper overseas imports to more expensive South African manufactures results in a transfer of spending power from Botswana consumers to South African producers or, in other words, the subsidisation of South African industry by Botswana.

71. A Customs Union between a rich and a poor nation normally produces a polarity of economic development, with the better endowed areas growing at the expense of the poor areas. In recognition of this process, it is necessary to make some provision for the automatic redistribution of resources towards the poorer partner. The Botswana Government will therefore seek to negotiate with the Government of the Republic of South Africa a more equitable customs arrangement.

72. Although Rand currency is legal tender in Botswana, the Government is not represented on the Board of the Reserve Bank of South Africa and has no way of influencing South African monetary policy where it adversely affects the Botswana economy. Botswana does not receive the interest (about R100,000 p.a.) on the monetary reserves held by the Reserve Bank as backing for the currency in circulation in Botswana and Botswana has no share of the fiduciary issue of the Republic. In this field, too, the Botswana Government will seek to negotiate a more favourable arrangement.

73. The questions of new customs and currency arrangements are intimately linked, since balance of payments problems which might arise if a national Botswana currency were introduced would necessitate some control over external trade. Meanwhile the Government states its intention to take no precipitate action to alter the existing customs or currency arrangement.

Chapter III—Water Resources

General:

74. Shortage of water supplies is a major limiting factor in the development of Botswana. It limits the number of cattle which can be supported, the extent of arable farming which may be safely carried on and the development of urban centres and their associated industries. Yet, despite the apparent aridity, considerable water resources do exist and can be developed.

75. The annual rainfall varies from 24 inches in the extreme north east to 8 inches in the extreme south west, with an average of abcut 17 inches for the whole country. Virtually all the rain falls between October and March but is often concentrated in quite short periods. In a given place the minimum annual rainfall may be as little as half or as much as double the annual average.

76. The most obvious unexploited water resource is the Okavango Delta which annually receives some seven million acre-feet of water from Angola. However in economic terms the run-off in the ephemeral rivers of the Limpopo Watershed is of greater immediate significance. The bulk of the population live in the eastern part of the country and most development will take place there. It has been estimated that every year Botswana experiences a run-off of at least one million acre-feet from this area. Storage dams and weirs would, if properly placed, considerably reduce this annual loss of water.

77. Although the rivers flow for only a few days each year very large quantities of water can be retained, as has been demonstrated by the construction of the Gaberones and Lobatsi Dams. In the larger ephemeral rivers, millions of gallons are stored in the sand of the river bed, and may be extracted from wells.

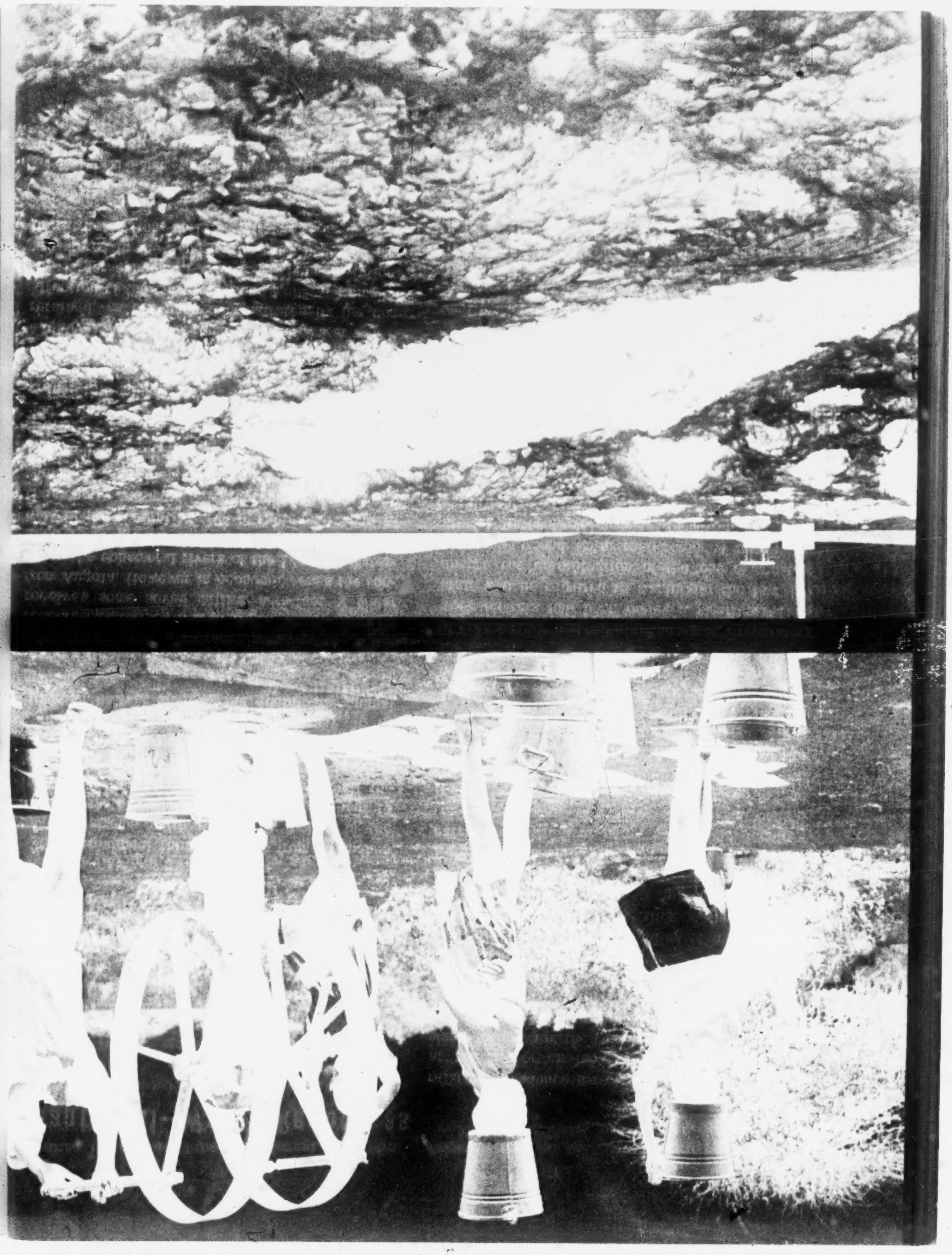
78. Over three quarters of the country is covered by Kalahari sand, which absorbs all the rainfall without causing any runoff. Grass grows with relative abundance here but there are no streams at all. In certain localities shallow pans hold water for much of the year. Other localities, containing calcareous deposits, give rise to aquifers where shallow wells may be sunk.

79. In many parts of the country, excluding the central Kalahari, small supplies of underground water can be found by drilling at geologically selected sites. Hundreds of boreholes have in fact been drilled opening up vast areas to grazing. Boreholes, coupled in some areas with sand extraction from river beds, have made possible the development of nearly all of Botswana's towns. But with the exception of Serowe and Ghanzi, where there are particularly good aquifers, no borehole supplies have proved adequate for towns; most are now critically short of water.

80. At present there is no special water law in Botswana. The Government intends to pass legislation for the regulation of the abstraction of both surface and underground water. Preparatory work on this has been done; a small part-time staff will be required to administer the law. To ensure the co-ordination of the use of surface and underground water resources, an inter-ministerial Water Development Committee has been established.

Underground Water Supplies:

81. The Geological Survey Department undertakes the exploration of underground water resources as part of its general geological survey activities, and also runs an organisation for the drilling of boreholes. Apart from the boreholes sunk by private persons using their own resources, boreholes are drilled either for Government use or for stock-owners under the Borehole Repayment Scheme. During the next three years it is planned to drill and equip 150 boreholes under the latter scheme. The cost will be met through loans awarded to either individuals or syndicates of farmers who can offer the necessary security.



In addition to the "repayment boreholes" about 20 boreholes will be required each year for Local Government, schools, dispensaries and similar institutions.

82. Borehole equipment is a costly asset unless it is properly maintained. Government's policy is to encourage the use of private enterprise where possible in carrying out maintenance and repair services. But until private mechanics are more widely available, and until borehole owners achieve a higher level of mechanical expertise, it remains essential for Government to operate a maintenance service. Government proposes to establish a semi-autonomous borehole maintenance unit with its own accounts and operated on a commercial basis. Although a degree of subsidisation will be required initially, the intension is to make the unit self-financing covering full costs, including depreciation of equipment and servicing of capital, taking one year with another.

83. The Government considers it highly desirable that the true cost of providing water should be brought home to cattle owners. It is intended that this will be achieved by placing all boreholes provided by Government on a repayment basis and insisting that Government's maintenance service is fully paid for. Placing water supplies on an economic basis would create an added incentive for stock-owning to be treated as a commercial activity.

84. Hydrogeological research work will be continued as rapidly as available funds and staff will permit. The long term objective is to produce an accurate and detailed map of all Botswana's underground water resources. This work among other things involves geophysical surveys, the drilling of observation boreholes, the dating of ground waters and systematic chemical analysis of waters from all boreholes.

Surface Water:

85. Proper planning of the use of surface water can only be undertaken once comprehensive hydrological data has been collected, producing a sound technical basis for the construction of dams and weirs. The information presently available is totally inadequate. It is therefore proposed, with the assistance of the UN Special Fund, to establish a net-work of hydrological gauging stations.

86. The expenditure of funds on the collection of hydrological data can only be justified if the knowledge acquired will open up new opportunities for productive investment or enable the Government to provide essential services more cheaply than would otherwise be possible. Moreover, it is vital to concentrate hydrological data collection in those areas which seem to have the greatest economic potential. For this reason it has been considered essential to combine hydrological investigations with other pre-investment studies. Surface water resources need to be harnessed to supply;

(a) Livestock, through the construction of earth stock-dams;
(b) Irrigation agriculture from dams and sand wells;
(c) Industry and mining;
(d) The Railways;
(e) Domestic requirements.

87. There are two regions where the systematic collection of hydrological data is proposed: (a) in the Okavango River Drainage System and (b) in the Limpopo Basin.

88. Preliminary soil surveys in the Okavango Delta area have indicated that there are large areas of potentially irrigable land where maize, rice, cotton, jute and many other crops could be successfully grown if only the river system could be controlled and channelled. Agronomic trials at Moshu Agricultural Experimental Station in Ngamiland have demonstrated that average yields of cotton of over 1,800 lbs. per acre can be obtained on seasonally flooded land. In this Plan it is proposed to carry out the additional hydrological and agronomic experimental work necessary for the planning of detailed irrigation schemes in this area.

89. The Limpopo Basin contains the main commercial and administrative centres many of which are critically short of water. Over 80 per

A village borehole
Gaberones dam in flood

cent of the population lives in this area. Furthermore some 16,000 acres of potentially irrigable land have been identified in a preliminary soil survey. The Government therefore proposes in this Plan to establish hydrological gauging stations on the main rivers flowing into the Limpopo. In addition it is intended to proceed with detailed planning leading to the construction of multi-purpose dams in key places where water is required for irrigation as well as for industrial and domestic purposes. These projects are described briefly in Part II.

90. Water supplies in rural areas are mainly drawn from boreholes. These have an average capital cost of R4,000; there are also maintenance and running costs to be met. Furthermore in many places the underground water is either too deep or too saline to be used. The construction of small earth dams offers an alternative source of water which is often cheaper. It is therefore intended to establish with funds provided by the United Kingdom Freedom from Hunger Campaign a mechanised dam building unit capable of constructing up to 50 dams in a year. This will not only permit the opening up of new grazing, but will also allow farmers to reside permanently at their "lands" and reduce the demand for water in the larger villages. The unit will be operated by the Agriculture Department and is further described in Chapter IV.

91. Large areas of the country, though producing relatively abundant grass, are deficient in both underground water and dam sites. It is intended to use the experience which has been gained in other parts of the world in developing artificial catchments and haffirs for cattle and family use. In constructing small rural water supplies it is intended to make full use of the self-help (Ipelegeng) movement whose keeness has been demonstrated but which needs expert technical guidance. This guidance will be provided by a technician in the Water Branch to be appointed for this specific task.

Chapter IV—Agriculture

General:

92. Over 90% of the working population are engaged in agriculture. Livestock products account, together with by-products, for some 85% of total exports, making cattle ranching by far the most important economic activity in Botswana. In the arable sector, the vast majority of Batswana depend for their food on the cultivation of subsistence crops such as sorghum, cow peas, millet and maize. When the crops fail there is famine; it is therefore vitally necessary for farming practices to be improved to the point where the country is self-sufficient in foodstuffs.

93. Although it is intended to diversify the economy by the development of minerals and secondary industries, for the reasons given above agriculture will remain by far the most important industry of Botswana, and the improvement of the standard of living of the people will largely depend upon agricultural development.

94. The Agriculture Department is concerned with improving animal and crop husbandry while the Veterinary Department has responsibility for livestock disease control. Contact with the farmer is achieved through the Agriculture Department's extension service, with the final and most important link in the chain being the Agricultural Demonstrator. He is the man in direct contact with the farmer and it is he who ultimately provides the farmer with the help and guidance he requires.

95. The traditional system of agriculture and land tenure places a number of obstacles in the way of development. It is common, for example, for the livestock to be kept at cattle posts many miles distant from the cultivated lands, thus making the introduction of integrated farming difficult. Because of the shortage of water, natural watering points belong to the tribe and everyone has access to them; fencing is generally prohibited. It is therefore difficult to secure control over grazing. The Government will make energetic efforts at all levels to persuade the people to accept modifications of the present system of agriculture and land tenure, adapting them to present conditions and modern requirements. This change will be achieved by persuasion and education rather than by compulsion.

Livestock Offtake:

96. The cattle population is currently estimated to be between 900,000 and 1,000,000 head, as compared with the figure of 1.4m recorded for 1964. The losses from the drought are valued at over R8 million. In 1965 the offtake reached a record 160,000.

97. Partly as a result of sales forced by the drought, there is evidence that the traditional reluctance of stockholders to sell their animals is breaking down. There appears to be a growing awareness of the value of livestock as economic assets rather than as status symbols. A regular offtake of over 10 per cent, therefore, seems possible.

98. The carrying capacity of Botswana is estimated to be about 2½ million livestock units provided water resources can be developed in such a way as to enable the cattle to be distributed evenly over the available grazing. Government's long term objective is therefore to build up the national herd to over 2 million head enabling an export target of 200,000 cattle to be reached. The market in Southern Africa is likely to be able to absorb half this production; there is a reliable market for the remainder overseas.

99. The projections in this Transitional Plan are based on the assumption that the national herd now numbers 950,000 head and that the throughput to be handled by the Botswana Meat Commission will be as follows:—

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
No. of cattle sold	125,000	60,000	70,000	80,000	90,000

100. The high offtake in 1966/67 has been precipitated by the continuing drought. Since a very large proportion of the calves was lost in 1965, a low figure for offtake is likely for 1967/68. Thereafter it has been assumed that a steady recovery will take place.

Disease Control:

101. An essential aspect of the livestock industry is the control of disease, without which Botswana beef would quickly lose its market and its high reputation. The cost of veterinary services amounts to approximately 10% of the total value of livestock products exported annually.

102. From the economic point of view the most serious of the cattle diseases is Foot and Mouth Disease. Control is based on a system of cordon fences and quarantine camps dividing the country into four main areas. In addition annual inoculation against Foot and Mouth Disease is carried out in endemic areas. Other diseases causing serious losses, such as Anthrax, are controlled by annual inoculation on a free but compulsory basis. Recently the incidence of measles in cattle has risen to 17% among slaughtered animals causing a considerable financial loss to the economy. This problem must be tackled by the control of tape-worms in humans. The Medical Department will undertake a survey to discover the extent of tape-worms in humans as a basis for preventative measures.

103. The Veterinary Department runs a Research Centre at Ramathlabama where routine diagnostic work is carried out. Here, too, useful investigational work on vaccine production and local disease problems is undertaken.

104. The Government recognises the importance of the work of the Veterinary Department as an essential pre-requisite for a prosperous livestock industry, and regards expenditure on disease control as a necessary continuing commitment to be carried on the recurrent budget. It is, however, convinced that the Department's scale of operations is adequate for present requirements, and there is no necessity for expansion.

Tsetse Fly Control:

105. Tsetse Fly infests the greater part of the Okavango Swamps and without control would spread to cover the northern part of the country, making the main population centres in Ngamiland uninhabitable. For many years the Government has maintained a Tsetse Fly Control Unit which has successfully halted the spread of the fly and reclaimed some areas for resettlement.

106. The control of tsetse fly in Ngamiland is of benefit not only to Botswana but also to neighbouring countries which are protected. The cost to Botswana is over R200,000 per annum, equivalent to the value of about half of the total cattle marketed from Ngamiland each year. This is an international problem and should be recognised as such.

107. The Government is convinced of the necessity to continue tsetse fly control, but the activities of the Unit will be restricted to limiting the advance of the fly. Funds are not available to engage in a large scale eradication campaign, and even if the finances could be found it is doubtful whether the expenditure would be justifiable on economic grounds at the present time.

Livestock Development:

108. The two avenues for the development of the livestock industry are (a) the improvement of the quality of livestock and (b) the expansion of the size of the national herd by increasing the available areas of grazing. The Transitional Plan includes projects covering both these aspects.

109. The Agriculture Department has only in recent years obtained funds to enable it to establish an animal husbandry extension service. It is now proposed to form additional mobile animal husbandry teams to provide an advisory service in the more remote areas which cannot be covered by the Agricultural Demonstrators. The latter, although required to advise on both animal and crop husbandry, are only sufficient in number to assist those in the Pupil Farmer Scheme and the Pupil Stockman Scheme in more settled areas in Eastern Botswana.

Drought in Ngamiland

Brahmin Bulls Sunnyside Farm

110. Because of the communal system of grazing, it is difficult to teach proper grazing management through the normal system of extension advice. To tackle this problem the Government proposes to establish demonstration ranches where the small stockowner will be able to "finish off" his animals in return for a grazing fee. At the same time he will be taught the benefits of fencing and correct stocking, thereby coming to associate better prices with good husbandry. It is difficult to demonstrate good management practices in the communally grazed and overstocked tribal areas. Eventually it is hoped that the benefits of modern methods will become generally realised and fencing will be allowed in the tribal areas.

111. In order to improve the quality of livestock, the Government runs a bull subsidy scheme. Improved bulls are purchased and sold to cattle buyers at a subsidised price. In addition it is planned to run bull breeding camps which will provide a further source of improved breeding stock to ranchers.

112. There are two other livestock improvement schemes planned. Firstly, a Dorper Ram Subsidy Scheme will be managed on similar lines to the Bull Subsidy Scheme; the intention is to improve the quality of the indigenous mutton sheep. Secondly, a Karakul Sheep Subsidy Scheme is aimed at facilitating the introduction of a Karakul pelt industry through the establishment of a small stud Karakul flock.

New Grazing Lands:

113. Localised overstocking and over-grazing resulting from large concentrations of cattle around a limited number of watering points has resulted in widespread destruction of the natural grazing. An increase in the number of watering points, coupled with control of the numbers watered at each point would contribute considerably towards reducing the destruction of the veld and preventing soil erosion. The Government proposes to achieve this objective in three ways: firstly, by the sinking of new boreholes financed on a loan repayment basis; secondly, by the construction of stock-dams using a mechanised unit; and thirdly, by pumping water from sandwells and permanent pools.

114. In the past the Government has provided free boreholes in tribal areas; this practice has been discontinued. It is most important that the sinking of boreholes should be placed on an economic basis, and that those who benefit should meet the cost. Loans will be channelled through the National Development Bank, enabling individual stockowners, or groups of stockowners formed into syndicates, to sink boreholes. The number of cattle to be watered at each borehole will be strictly controlled by the Livestock Industry Development Teams of the Agriculture Department. The Government proposes to allocate R200,000 per year of development funds, which will enable some 50 boreholes to be drilled and equipped annually.

115. The construction of storage dams enabling surface water to be conserved can provide in many places a cheaper supply of water than boreholes. The Government is establishing a mechanised unit at a capital cost of R360,000 provided by the United Kingdom Freedom from Hunger Campaign, capable of constructing about 30 dams and sand river weirs in a year. In order to ensure proper grazing control around such new watering points a written undertaking will be obtained from future users on the limitation on stock numbers in the vicinity of the dam; the Agriculture Department will supervise the grazing control.

116. Storage dams located in arable farming areas would enable cattle and work oxen to be kept at the arable lands in early winter. The farmer could then practice winter ploughing – an essential technique for dry land agriculture – and he could feed crop residues to his stock. The farmer would also have a better supply of natural manure to apply to his arable lands. Permanent water supplies at the arable lands would enable the farmer to live at his "lands" all the year round and practice an integrated arable and livestock system. With the farmer permanently resident at his arable lands, with his stock in the vicinity, there would be better contact with the field extension staff and other services.

Agricultural Extension Service:

117. Under the Pupil Farmer Scheme, farmers are supervised in groups of twenty to thirty by trained agricultural demonstrators. The farmers advance through various grades, from Pupil Farmer to Progressive and Improved Farmer, up to the highest class of Master Farmer. The average size of the holding is nearly 40 acres, growing cotton, sorghum and beans as the main crops. A good farmer in a reasonable year can gross over R500, and even in periods of serious drought can produce sufficient food crops for subsistence.

118. Since it is not possible with the limited resources available to maintain an extension service providing guidance for every farmer requesting it, the Government intends to concentrate available funds on the expansion of the Pupil Farmer Scheme. A new demonstrator training college is to be built at Gaberones at a cost of R410,000, provided by the United Kingdom Freedom from Hunger Campaign, capable of producing 50 new demonstrators each year. The course will last two years, and cover both crop and animal husbandry practices.

119. The Agriculture Department's extension service is also responsible for crop protection measures. Quelea birds cause severe losses of grain, and control of this and other pests and diseases will require an annual expenditure of some R32,000. Quelea control is another problem requiring international cooperation.

Research:

120. The success of agricultural extension work in Botswana has been partly due to the reliability of the advice offered. This has been possible because the advice has been soundly based on research carried out at the Agriculture Department's experimental stations. The extention worker knows that if he recommends any farming technique, this technique has been already proved to be successful. Research must always be ahead of current practice and problems must be investigated before they become limiting factors in the development of agriculture.

121. Due to the slender resources of staff and finance available, research will be confined entirely to practical experimentation; assessment of possible new crops, different fertilisers and alternative methods of husbandry. At present there are four small experimental stations with a total area of only 82 acres. It is urgently necessary to expand these facilities; provision is therefore made in the Plan for a new Central Research Station, for irrigation research, for limited research in grazing management and for pasture investigations.

122. Applied research is required in particular to investigate two main problems:

(a) the long term maintenance of fertility in dry-land farming, where progressive farmers are opening up very large areas, which may lead to serious soil erosion;

(b) the appropriate irrigation farming techniques to be applied on the proposed irrigation schemes; so far there has been little experience with irrigation in Botswana and, since the capital cost of irrigation schemes is high, it is vitally important that the optimum techniques are used from the start.

Chapter V—Game, Fisheries and Forests

Game:

123. Botswana contains within its boundaries a great variety of game, said to be the largest concentration of plains game occurring in Africa today. This is an important asset, but its preservation is costly. There are direct costs in the form of game-wardens, fencing and associated expenditure, and indirect costs arising from the need to segregate disease carrying, free-ranging game from domestic livestock.

124. To some extent game and cattle compete for grazing. Although it is true that game can survive where cattle cannot, there are instances where the presence of free-ranging game animals makes more difficult an expansion of the grazing areas available for cattle. On the positive side, game are important to the economy in three main ways:

(a) as an attraction to tourists;

(b) as an attraction to organised hunting expeditions;

(c) as a source of food.

125. There is a clear conflict as between the development and preservation of game and the development of the livestock industry. At present it is not possible to resolve this problem, since the necessary technical information is not available. It is not known to what extent the game are disease carriers; it is not known whether the game are able to adapt to the presence of disease control fences, nor is it known how these fences have upset the ecological balance of the country. It is evident that the game cause considerable damage to the disease control fences and, at the same time, thousands of animals are being killed by the presence of the fences. The Government considers it a matter of urgency that scientific evidence is secured upon which a sound policy could be based. To this end advice will be sought from overseas.

126. The viewing of game in its natural habitat is becoming increasingly attractive. The number of places where this may be done are rapidly becoming fewer. Botswana is well placed in this respect to attract tourists. In particular the Chobe Game Reserve is in a good position to attract those visiting the Victoria Falls.

127. Last year some sixty thousand tourists visited the Victoria Falls. If Botswana could induce half of these to spend a day in the Chobe Game Reserve and spend, say, R10, the total tourist expenditures would amount to over R250,000. While it is true that a major part of this expenditure would be on imports, the money spent on local services and taxes would contribute significantly to the economy.

128. If it is to retain its status as a tourist attraction the Chobe Game Reserve will have to be carefully managed. The Government therefore proposes in this Plan to construct a new main road linking the Reserve with the main roads in the north. In addition a modest increase in staff and vehicles is necessary to improve the supervision of the Reserve.

129. As a result of the introduction of organised hunting by safari companies, revenue from the sales of game licences has risen from R23,000 in 1962 to R73,000 in 1965. Expenditure by safari companies in Botswana is estimated to be over R200,000 p.a., and this does not take into account capital expenditure on roads, camps and air strips, all of which contribute to the development of the infrastructure of the country.

130. In addition to the benefits mentioned above, it is important to remember that game provides a source of food for a part of the population, which is particularly valuable in times of drought. It has been estimated by F.A.O. that the use of game meat permits the export of R1.8 million worth of beef. It is, however, difficult to estimate the amount of meat consumed in this way, and even more difficult to put a proper valuation on it. It is obvious that game has a significant value in this respect and the Government intends to carry out a survey to determine this value.

131. The ranching of game is another possibility which needs investigation. It is a highly sophisticated operation requiring a great deal of research before it could become a viable economic proposition. It is said that game animals are five times more efficient than cattle in producing meat. Game animals are more resistant to disease and can thrive in dry areas where domestic livestock would perish. Game ranching is being practised in Rhodesia and it is believed that a similar industry could be established in Botswana.

132. For all the reasons given above the Government is concerned to preserve its great heritage of wildlife. The Government intends to establish a Botswana Wildlife Trust which will seek to obtain funds from both governmental and private bodies throughout the world interested in the preservation of game. Botswana itself does not have the resources for this task. However it is proposed to strengthen the Game Department to ensure that the game laws are observed and to prevent where possible actions damaging to the wildlife of the country. The development of the tourist industry is discussed in Chapter VI.

Fisheries:

133. As a result of a grant from the Oxford Committee for Famine Relief, the Government was able to finance a survey of the fisheries resources of Ngamiland completed in 1965. Considerable quantities of fish were found, particularly in the Okavango Delta. A small fisheries extension service has been established with funds provided by OXFAM to teach modern techniques of catching and curing fish.

Forestry;

134. The main natural forest resources of the country are to be found in the Chobe District which is in the north. An assessment of these resources was made in 1935–38 and resulted in a timber concession operating during the period 1945–55. A similar assessment of the northern areas of the Chobe District was carried out during 1963–66. As a result a timber concession to cover the exploitation of some 9,000,000 cubic feet of timber at the rate of 500,000 cubic feet per annum is being considered. Management of the natural woodland on a sustained yield basis is considered to be possible. If the concession is taken up then a timber industry employing up to 300 persons within the Chobe District could be maintained. Direct annual revenue of R17,000 is expected to accrue to Government from this project.

135. Assessment of other natural timber resources of Botswana is also necessary. Surveys with this in view are proceeding in the southern part of the Chobe District. Further surveys will be undertaken in the southern parts of the country where there are the major concentrations of population. Suitable poles for house building are in short supply in some areas whilst wood fuel is also scarce near some of the larger towns. Town and village plantations on suitable sites near the major centres of population can meet these needs. Re-afforestation under conditions of low rainfall, high seasonal temperature and seasonal frosts is likely to be costly. The experimental plantation work carried out in the period 1940–52 and the existing plantations will form the basis of this development.

136. At present almost all fence posts used in agricultural and veterinary developments are imported. These are either metal posts or treated wooden poles. A large part of these requirements could be met from poles grown in Botswana provided suitable treatment plants are also established.

137. The possibilities of timber growing on a plantation basis in Botswana are limited because of the adverse climatic conditions. Given suitable sites plantations of poplar grown for timber used in match production are possible as shown by the pilot project at Mogobane.

Chapter VI—Industry and Commerce

General:

138. Botswana is in a very early stage of industrial development. The lack of natural resources, the small size of population and its geographic 'scattering, water shortages and low income levels have combined to impede the growth of industry and commerce. Apart from a large abattoir and meat cannery, industrial enterprises in this country are few and small. There are two population centres, Francistown and Lobatsi, in which are located virtually all the industries. The capital, Gaberones, being new, has very little industry as yet. In Francistown or nearby there is a leather tannery, a creamery, a bonemeal and animal fodder plant. At Lobatsi, in addition to the Botswana Meat Commission, are located a maize meal and malt mill, and two small textile operations. Otherwise, industrial production in other population centres is almost non-existant.

Import Substitution Possibilities:

139. Ample opportunities appear evident for industries based on import substitution. For example, in 1965, Botswana imported over half a million Rand worth of each of the following industrial products (in some cases imports exceeded one million rand):

Sugar
Food and drinks other than soft drinks
Clothing other than blankets and rugs, shoes and boots
Textile fabrics and piece goods
Building materials other than bricks and corrugated iron sheeting
Motor Vehicles
Machinery and equipment
Petrol
Diesel Fuel

140. Of course it will be a great many years, if ever, before a country like Botswana can become self sufficient in industrial products like motor vehicles. But in other items, in view of the available domestic market, it is to be hoped that local and foreign investors and entrepreneurs will investigate the possibilities for local manufacture. As well there are raw materials such as sorghum, maize and wheatflour which are imported in large quantities annually. The only maize mill in the country uses raw materials imported from the Republic of South Africa. With the end of the drought, local production of such basic food products should increase sharply, thereby providing opportunities for domestic processing.

Possibilities for Processing Local Raw Materials:

141. Judging by the experience of other African developing countries and with due regard to the characteristics of the Botswana economy, a wide range of industries, operating usually at the minimum economic scale, should be viable now or in the near future. A small cotton ginnery based on the, as yet, limited local supplies of cotton should be feasible. Fish and fish meal, jute plants and timber operations based in Ngamiland and Chobe are a d stinct possibility. Bottling plants for sorghum beer, soft drinks, mineral water and South African wines and spirits could also be established. Still other industrial possibilities, based on local raw materials are: —

Boots and shoes
Leather products, except footwear
Bricks and tiles
Pottery
Furniture
Matches
Meat by-products such as sausage casings and laundry soap
A second abattoir and cannery to serve the West
Costume jewellery for export
Tanning of game hides and processing of game skins
Low cost protein reinforced foodstuffs
Vegetable and fruit canning
Potato processing
Cheese and dairy products
Cattle cake.

142. In the case of most of these products the minimum economic size of plant is small – raw materials represent a very considerable proportion of unit cost. Again, although detailed figures are not available, the domestic market should, in most cases be sufficient to support a small plant.

Processing Imported Materials:

143. Nor should the opportunities be overlooked for local processing of imported raw materials. If other developing countries are any guide, and in the absence of firm detailed import statistics, there should be room for a variety of plants in Botswana processing and/or assembling such products as —

- Nails and wire
- Nuts, bolts and screws
- Enamel ware
- Transistor radio assembly
- Knitwear
- Cement blocks
- Reconstituted milk
- Inexpensive clothing
- Assembly of animal-drawn agricultural machinery
- Bicycle and sewing machine assembly
- Textile dyeing, bleaching and finishing
- Tyre retreading
- Cigarettes and other tobacco products
- Fertilizer mixing

These are only a few of the potential industries which warrant investigation by the private sector, with the Government assisting in every way possible.

Small Scale Industries:

144. The Government is aware that only small sized plants are likely to be viable but is impressed with the employment possibilities and the opportunities for increasing national income by local production, processing and assembly. Small scale industries are vitally important in the economies of most countries, industrially advanced as well as developing. In Japan enterprises employing 4 persons or less account for almost 60% of the total number of industrial establishments. In Germany, plants with less than 100 employees accounted in recent years for 27% of total industrial employment and 23% of total industrial output, according to United Nations figures. Coming closer to home, in Tanzania, over 90% of all industrial units employ less than 100 persons and make up over half of industrial employment. It has been estimated that for Africa as a whole, small scale industries account for over one-third of total industrial output and employ almost one million workers. In a country like Botswana, small industries can provide jobs, create income, raise the level of technical skills, place not overly heavy demands upon the economic infrastructure and encourage the development of local entrepreneurship.

Handicraft Industries:

145. Handicraft or cottage industries are still in an early stage of development in Botswana. Individuals with little or no formal training are producing animal wood carvings, furniture, toys, curios, game skin rugs, reed mats, baskets, straw hats, pottery, beadwork, metal work and leather work. Marketing of these products is haphazard and production poorly planned. As tourism expands, and if training facilities can be provided, handicraft industries will become more important.

The Botswana Meat Commission:

146. In the future industrial development of this country, the Botswana Meat Commission will of course play a leading role. Early in 1966, the Botswana Meat Commission, a statutory body, took over the administration of the abattoir and meat canning factory at Lobatsi. The organisation is responsible for all cattle marketing in Botswana. Capital investment is R1,676,000 provided by the Commonwealth Development Corporation and the Government.

147. About 135,000 animals were slaughtered in 1965 (an abnormally high rate due to the drought and a figure of 100,000 a year is more representative) and employment of a highly seasonal nature provided for 1,200 workers. Major markets are Southern Africa, Zambia, the Congo and the United Kingdom, particularly for

boneless beef. The total value of meat exports last year was R9.7 million, some 85% of national exports. Boneless beef, high grade corned beef, meat extract, bonemeal, edible fats, meat meal and tallow are the major products of the Botswana Meat Commission.

148. Substantial additions to capital investment have been made in recent times at the Lobatsi operation and more are planned. A new killing floor with in-line dressing and a capacity of 1,500 head a day is now in operation and is the first of its kind in Africa. During the next twelve months it is expected that refrigeration capacity will be increased by 2,000 tons, a new and larger by-products plant built and a 2,500 kw power plant added. The capital cost of R750,000 will be financed partly by the commercial banks and partly through suppliers' credit and no Government funds will be required. About the only other major capital expenditure envisaged over the next two years is a further increase of 2,000 tons in refrigerated storage space at a cost of R150,000. The compressors now being installed will be able to cope with the full 4,000 tons of additional storage capacity.

149. The basic objective of the Botswana Meat Commission is to be able to handle efficiently all of the livestock likely to be offered for sale to the Lobatsi abattoir. Generally, the feeding and upgrading of cattle is not widely practised in this country. Hence the abattoir receives a flood of cattle in May, June and July but does little slaughtering from October to February. It would be highly advantageous if the supply of cattle offered could be spread out over the year. Abattoir capacity would be more efficiently utilised and selling prices of the processed meat, and therefore buying prices from the cattle owners would be higher. The Government plans to introduce holding grounds and to encourage cattle feeding practices to this end.

Commercial Activity and Tourism:

150. The economic development of Botswana in the years to come will undoubtedly provide numerous opportunities for new service industries such as hotels, restaurants, dry cleaners, variety stores, repair shops, etc. The country, with exceptions, is short of good tourist facilities. It is generally agreed that Botswana has perhaps the best remaining concentration of game in Africa today. The plans for expansion of the Chobe Game Reserve as a tourist attraction have been outlined in Chapter V. Botswana has other attractions including the Kalahari Desert, the newest completely planned national capital in the world and some of the largest villages in Africa. Facilities for tourists are being steadily improved in terms of hotels, restaurants, and other service industries in population centres of any size. There is an immediate need for a new hotel at Serondellas in the Chobe Game Reserve and an additional hotel at Maun near the Moremi Game Park, both of which are suitable projects for the private sector. The national road network expands each year in length and in quality. Botswana National Airways has regular services all over the country and connections with international air lines, while a railway linking Johannesburg and Salisbury passes through the eastern part of Botswana. No impediments are placed in the way of tourists and Botswana today is one of the most accessible countries in Africa to the visitor, whatever his national origin, race or creed. It is the intention of the Government to continue this policy.

Local and Foreign Markets:

151. A further factor affecting industrial development in Botswana is the customs agreement to which Botswana is a party. With Lesotho and Swaziland, Botswana is a cosignatory to the 1910 Customs Agreement with the Republic of South Africa, now subject to renegotiation, which creates a common market of these four countries and South West Africa. This agreement, though it brings benefits to Botswana, does, however, prevent the establishment of customs tariffs to provide protection for local infant industries. Botswana also enjoys customs agreements with Malawi and Rhodesia which permit the free flow of locally manufactured commodities. Thus, although Botswana does not have recourse to the popular tariff policies adopted by many developing countries to encourage local industrial development, it stands in the unique position of

Abattoir and Meat Canning Factory, Lobatsi
Brickmaking, Bokaa
Road maintenance, Notwani

commanding the largest single market in Africa for locally manufactured or produced goods. This market, consisting of seven countries and including some of the richest states in Africa, will accept Botswana exports free of import duty.

Industrial Sites:

152. As part of the Government's policy to encourage industrialization by every reasonable means, a properly planned industrial area is included in the new capital of Gaberones. Industrial sites, varying in size from half an acre to over 4 acres, all with rail and/or road access, are grouped together in an ideal location. Over half the available sites have already been taken up, including most of the larger plots and the number of enquiries received to date from other potential investors is most encouraging. The Francistown Township Authority is at present negotiating for the purchase of land for industrial sites there. It is the Government's intention to support the creation and growth of such sites as a positive inducement to new industries and the efficient re-location of existing plants.

The Financing of Industrialization:

153. Botswana has a recently established National Development Bank which, for various reasons, principally a shortage of loanable funds, has not yet become a vital force for economic development. Loans outstanding amount to some R600,000 principally in agriculture and for boreholes and the Bank has few funds readily available. Industrial loans are a minescule proportion of the total outstanding and a number of applications have recently had to be refused or deferred due to the Bank's financial straits.

154. Effective national credit institutions in Botswana are vitally needed. The activities of the commercial banks are regulated by the financial and credit policies adopted by the Government of the Republic of South Africa. Thus the National Development Bank's facilities must be augmented if development, particularly of industry, is to be promoted.

155. The Government intends to put into effect as rapidly as possible changes which will make the National Development Bank a truly dynamic institution. The Board of Directors has already been strengthened. Government will attempt to raise substantial additional funds for the Bank for industrial and commercial purposes. The Government accepts the possibility that a development bank may operate at a loss, particularly in its early years. The Board has been instructed to place greater emphasis on loans to small industrial and agricultural investors. The management and staff of the Bank willbe strengthened and the headquarters moved to Gaberones. Generally the Government intends to strengthen the National Development Bank in every feasible way.

156. The need for industrial, commercial and agricultural expansion is so great that a Botswana Development Corporation is being considered. The Corporation would not duplicate the work of the Bank but supplement it, particularly in industry, commerce and certain agricultural activities such as ranching. The emphasis in the Corporation would be on the provision of technical assistance and entrepreneurship as well as finance for these sectors of the economy.

157. The Corporation would have a first call on the funds of the National Development Bank allocated for industrial and commercial purposes. The Bank could, for example, use the funds to purchase a 50% equity holding in the Corporation. Foreign investment in the Corporation would also be sought, possibly in the form of participation in the Corporation's equity. It is anticipated that the other nation or nations would assist also in providing technical specialists and entreprenerual talent as well. The Corporation would be empowered, and indeed expected, to invest in the equity stock of new enterprises, to provide technical advice when required, and if necessary to participate in management.

158. A commercially minded Board of Directors of the Corporation separate and distinct from that of the Corporation, separate and distinct from that appointed by Government. The Board would consist of senior government officials, representatives of the domestic private sector and representation also from any foreign countries participating on an equity basis. Initially it is planned

to commence operations in a small way with the emphasis being placed on acquiring the services of an able, private enterprise-oriented manager for the Corporation, an individual with experience in industrial development. The Corporation has a high priority in the industrial and commercial plans of the Government.

Minerals:

159. The prospect for mineral development is referred to elsewhere in the Plan where such matters as the Shashi Complex are dealt with. In the past, mineral development in this country has proved disappointing. Manganese, asbestos and gold mining operations have flourished and ceased. However future prospects are much better, particularly with respect to copper mining. The Roan Group of companies has the mineral concession for much of the Bamangwato tribal area and has for some years been actively exploring in the Matsitama region. According to company reports a substantial ore body has been located and if funds can be raised abroad for the power, roads and water development involved in the Shashi project, copper mining operations, including a concentrating plant, should begin within a few years. Copper and nickel ore bodies are known to exist at Sedibe and exploration is actually underway. Mineral concessions covering most of the country have been granted to foreign companies and it is confidently expected that favourable results will be obtained. The exploitation of the salt and soda ash deposits in the Makarikari Pans is one possibility as are the coal deposits at Mamabula.

160. Botswana's mineral situation now and in the foreseeable future is not likely to lead to the creation of industries based on the processing of local minerals. The stimulus to industry will come rather from the demand for manufactured goods generated in the economy by the presence of extensive copper mining and other mineral operations.

Cooperative Development:

161. The cooperative movement is in its infancy in Botswana, the first Registrar of Cooperatives having been appointed only in 1964. Although restricted by the shortage of funds seventeen societies have been formed and are operating successfully. As a consequence of the groundwork completed over the past two years a sound base has been created and the Government now believes it essential to make provision for the movement to be expanded as rapidly as possible.

162. The cooperatives are seen as an important means of enabling the mass of the people to participate in the commercial sector of the economy and for the profits made to be re-invested within the country. Cooperatives also offer a means of stimulating agricultural production by ensuring that the farmer receives the highest return possible for his crops, and enjoys to the full the benefits of higher productivity resulting from the use of improved techniques. Cooperatives can also provide a vehicle for modernisation and social change in rural areas by involving farmers in a commercial organisation. Cooperatives are regarded as an excellent training ground in elementary democratic procedures.

163. The first cooperatives formed were crop marketing societies; as a result of the drought the cooperatives were unable to operate on a significant scale. More recently, livestock marketing cooperatives have been formed with success, and it is proposed to press forward with this type of society. It is intended that some 20 livestock marketing cooperatives will be formed and within five years about 30% of all cattle will be marketed cooperatively. An important aspect will be the provision of improvement and "finishing" facilities on special cooperative holding-grounds, enabling the members to market higher grade cattle.

164. It is hoped that with the expansion of the Pupil Farmers Scheme, crop marketing societies will be formed with experienced farmers as members to whom short and medium term agricultural credit may be channelled by the cooperative without too great a risk. At present agricultural credit is distributed by the National Development Bank through the agricultural extension service. It is, however, agreed that extension workers should not be called upon to act as debt collectors

and the sooner cooperatives are able to take over the administration of agricultural credit the better.

165. A number of consumer cooperatives have been started. The objective is to establish a consumer society in each of the main population centres and also in other places where adequate trading facilities do not exist. The target is to establish between twenty-five and thirty co-operatives over the next five years.

166. It is considered highly desirable to build up a cooperative savings movement both as a device for the mobilisation of local savings for local investment, and to provide a form of credit for provident and productive purposes. The Co-operative Department hopes to form 150 Thrift and Loan Societies within the next five years, with total annual savings amounting to R200,000 a part of which will be made available for financing further cooperative development.

167. The capital investment needs of societi will be met through the agency of the Cooperati Development Trust. The Trust is a private no Government agency financed mainly by gran and loans for overseas sources. Cooperati credit from the National Development Bank wi be channelled through the Trust. Another impo tant aspect of the Trust will be its function a a financing agency for cooperatives, receivir the surpluses and savings of societies, an deploying them to promote other cooperati developments.

168. To achieve the expansion envisaged abov will require a progressive increase in the sta of the Cooperative Development Department. Th rate of development of cooperatives is limited i the immediate future by the shortage of educate local persons who can be trained as cooperati officers. The proposed expansion has been planne within the limitations arising from this shortage It will be necessary to create an Audit an Training section within the Department in orde to maintain proper supervision of 'societies' accounts".

Chapter VII—Physical Infrastructure

Roads:

169. The geographical situation and physical features of Botswana create acute transport problems. The productive areas of the country surround the Kalahari Desert – an immense area in which almost no economic activity takes place but which is also a serious obstacle to communications. The fact that the population centres are mostly small and scattered makes the problem even more intractable. Road construction is costly because the distances to be covered are great and the buildings costs high. Likewise the maintenance costs are unusually burdensome.

170. At present Government maintains some 2,500 miles of roads; the remaining tracks are virtually uncared for. Road surfaces are for the most part local gravel, clays and sand. There are some bitumenous stretches in the main towns, but most of the roads are very rudimentary. The two main trunk roads – the North-South road and the Francistown-Maun road – have been greatly improved over the past two years with the assistance of International Development Association, but otherwise few funds have been available for the betterment of roads.

171. Whilst it is true that the improvement of roads would greatly assist in welding the scattered communities of Botswana into a nation, with resources as scarce as at present, investment in this sector must be carefully judged in terms of measurable costs and benefits, that is in terms of the concrete gains likely to be realised for each Rand spent. Based on an analysis of this nature a small number of road improvement projects has been included in this Plan.

172. Provision has been made for the bitumen surfacing of the roads from Gaberones to Lobatsi and from Gaberones to the adjacent international border. Vehicle densities on the former road now exceed 200 vehicles per day, and are expected to rise further once the capital has become firmly established. It is no longer feasible to maintain this road in its present condition, and it has become a serious hazard to traffic. The tarring of this road is therefore considered fully justified. The flow of traffic on the border road is expected to increase markedly as a result of the growth of the capital, the prolongation of the hours during which the South African border gate remains open, and the tarring of the connecting road to Zeerust planned by the South African Government. It is proposed to raise this road to bitumen standard in the latter part of 1968.

173. Many of the existing bridges on the important main roads are subject to flooding and in parts the drainage is so poor that the roads become impassable during the rains. This is particularly true of the following roads:–

(a) Lobatsi to Kanye
(b) Kanye to Molepolole
(c) Sebinas to Totome

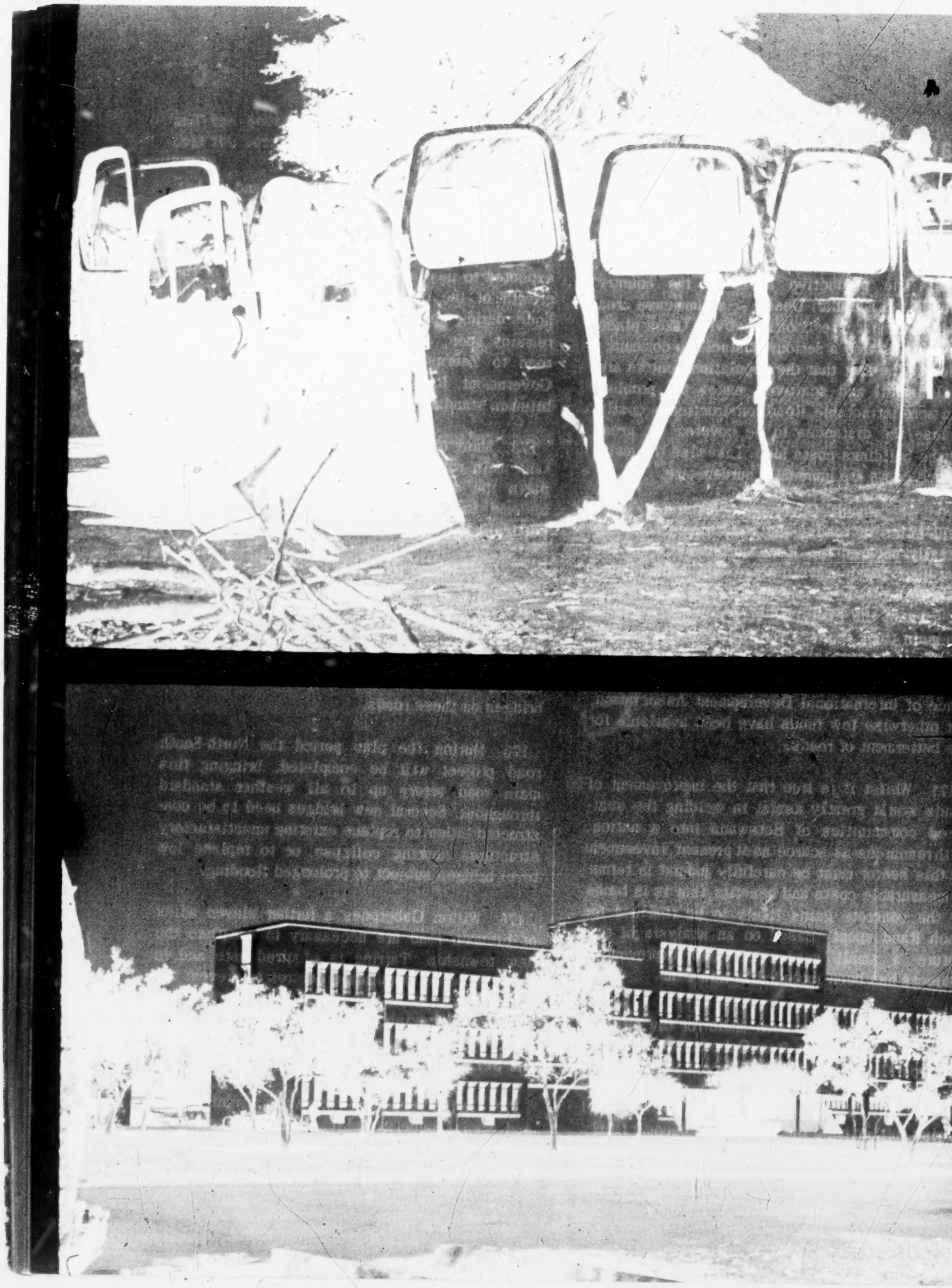
174. Provision is made in this Plan for a limited number of key betterment works and bridges on these roads.

175. During the plan period the North-South road project will be completed, bringing this main road artery up to all weather standard throughout. Several new bridges need to be constructed either to replace existing unsatisfactory structures nearing collapse, or to replace low level bridges subject to prolonged flooding.

176. Within Gaberones a further eleven miles of bitumen road are necessary to complete the new township. Tarring is required here and in other important population centres to prevent the dust menace to health in the areas where road traffic is appreciable.

Air Services:

177. In the immediate future the administrative and social benefits which can be expected to accrue from better communications may be gained



with least expense and most flexibility through the development of air services. In the case of a number of the remoter areas supplies can be provided more economically by air than by the costly construction of little used roads. Recently, a new company, the Botswana National Airways, has been formed to operate regular scheduled services linking Livingstone, Bulawayo and Johannesburg, with the main centres in Botswana. Mostly a D.C. 3 is used, adaptable for passengers, freight, or a mixture of passengers and freight.

178. The development of internal and external air services has created a need for improved airfields in most places where scheduled flights are operated. The runway at Gaberones has been strengthened and brought up to all-weather standards suitable for all immediate needs. The long term objective is to construct a new international airport capable of taking large modern aircraft at a new site a short distance away from the centre of the town. Provision is made in this Plan for a preliminary survey to locate a suitable site.

179. Improved airstrips are to be established at Maun, Ghanzi and Lobatsi first and later at Serondellas, Serowe and Mahalapye. It is estimated that a significant improvement could be achieved with an average capital expenditure of R52,500 per airfield.

Power Supplies:

180. The electricity supplies in Gaberones and Lobatsi have been recently improved and, apart from a further R500,000 required to complete this development, no further investment is envisaged by Government in the immediate future for these centres. The Botswana Meat Commission is installing new generating plants for the abattoir. In the longer term it is anticipated that a power station will be constructed at Shashi as part of the Shashi Complex providing electricity for copper mining at Matsitama and for industrial and domestic consumption at Shashi, Francistown and Tonota.

181. Provision is made in this Plan for electricity supplies in a number of rural centres – Maun, Serowe, Molepolole and Kanye – where small diesel generating plants need to be installed.

Posts and Telegraphs:

182. The Posts and Telegraphs Department is a self-accounting unit which has no difficulty in meeting all its costs from revenue. The capital expansion planned for the future can all be financed from loans on commercial terms but loan funds are not easily obtainable in Southern Africa. Some R680,000 is required over the next five years on a number of telecommunications projects which would greatly improve communications in Botswana. Among the projects envisaged are the installation of underground telephone cables and expansion of the automatic exchange in Gaberones, improvements to the main trunk line between Mafeking, Gaberones and Francistown and an extension of the teleprinter service.

Surveyor-General's Department:

183. The Surveyor-General's Department is responsible for the preparation of detailed maps which are an essential concomitant of all development projects. The present staffing of the Department will be unable to cope with the volume of work anticipated to arise from the implementation of this Plan. Although this bottleneck may be partly eased by the increasing use of consultant firms, this expedient tends to increase the cost of survey work. It is, therefore, planned to expand the department and funds must be raised for this purpose.

184. In addition to routine topographical and cadastral surveying, the department is responsible for town-planning. More staff are required for this work as well. Also, as a part of the normal recurrent services provided, a small training organisation is essential to provide on-the-job training for local technicians.

Buildings, Gaberones

Other Public Works:

185. The expansion of Central Government's services both as a result of the advent of independence and of the increased size of the development programme has created a serious shortage of housing in the main administrative centres. Funds are required in particular to permit the Surveyor-General's Department to move fr Mafeking in South Africa, where the departme is at present, to Gaberones. It is intended place the rental of Government housing on economic basis as soon as practicable, and the same time to make provision for a ho ownership scheme under the auspices of t National Development Bank.

Chapter VIII—Social Infrastructure

A. EDUCATION

Trained Manpower:

186. The primary aim in the field of education is to create in the shortest possible time, with such financial means as may be available, a stock of trained local manpower capable of servicing the country's economy. First consideration must therefore be given to those factors directly related to this purpose, that is the creation of the requisite skills for a balanced development in all branches of the nation's life, and achieving through this stock of human investment the highest possible degree of self-sufficiency.

187. The present number of posts requiring Category I manpower (i.e. persons with a degree or diploma qualification) is about 370, of which less than 10% are occupied by Batswana; the present number of jobs requiring Category II manpower (i.e. persons with a minimum educational standard of School Certificate) is estimated to be 1,600 of which less than one-quarter are filled by Batswana.

188. The secondary schools must produce qualified students capable of being trained not only to replace expatriates, but also to occupy new posts resulting from development and to meet the normal requirements arising from natural replacement. The target is to reach self-sufficiency in high-level manpower within 25 years. To attain this goal it is calculated that at least 250 School Certificate holders must be produced each year by 1975. The present plan envisages as expansion of the secondary schools which would make this possible.

189. Past, present and projected enrolment at different levels is as follows: —

	1961	*1966*	*1971*
Primary	39,000	75,000	80,000
Secondary	618	1,499	2,500
Teacher Training	109	296	660
University	6	80	140

190. On the minimum assumption that natural replacement of the stock of trained manpower occurs at the rate of 4% p.a., and that the increase in the stock of manpower will be 3% p.a., and assuming that expatriates will be systematically replaced between 1966 and 1991, the demand for high level manpower will be met as follows: —

	Total Requirements of Categories I and II Manpower	*Planned output of Local Matriculants*	*Shortfall to be met by recruitment of expatriates*
1966	417	45	372
1971	300	100	200
1976	300	255	45
1981	290	270	20
1991	300	300	–

191. It should be noted that it has also been assumed that the annual turnover of the stock of expatriates (mostly recruited on contract terms) will be 20% p.a.; this explains the fall in requirements between 1966 and 1981. If the demand for trained manpower grows faster than 3% p.a., then the output of matriculants will have to be further expanded between 1970–80.

Primary Education:

192. There are 247 primary schools with a total enrolment exceeding 75,000 or approximately half the population of school age. Very large increases in enrolments in recent years together with a meagreness of financial resources have resulted in a fall in standards. At present the pupil/teacher ratio is over 45 : 1 with more than 200 classes with over 80 pupils. The majority of the teachers are untrained and lowly paid. Were it not for a high degree of wastage throughout the course, amounting to 60%, the congestion of numbers would be even greater.

193. The majority of the school buildings are ill-suited for their purpose. Some are single room buildings used to accommodate as many as six classes. In these and many others there is also

the added disability of poor and insufficient equipment; indeed even the most elementary kinds of teaching aids are frequently lacking.

194. Primary education is mainly the responsibility of local authorities. The Central Government has in the past subsidised teachers' salaries and the construction of class-rooms and will continue to do so in the future. Nevertheless the Central Government considers that, in view of the paucity of funds available for education, these should at present be concentrated on post-primary education and on teacher training. Improvements in primary school facilities must be achieved through self-help and using funds raised by the local District Councils. The Central Government is supporting a request to donor agencies for Primary School Teaching Aids; this project is described in Part II. Government's long term objective is to provide a universal primary education in order to impart to all students permanent literacy. The numbers of students to be educated beyond that stage should be strictly determined by trained manpower requirements. In the short term, the situation at the primary school level can only be ameliorated either by greatly increased expenditure or by limiting enrolment. This is a serious dilemma facing Government, especially so as the popular demand for education is great and growing; but in so far as finance is not available, enrolment must be controlled if educational standards are not to deteriorate further. This will be partly achieved by the phased exclusion of all overage pupils and the discouragement of the practice of repeating classes. To make the best use of facilities in areas of acute congestion, the shift system will be applied.

Secondary Education:

195. The pattern of secondary education is one of three years leading to the local Junior Certificate Examination and of five years leading to the Cambridge School Certificate Examination. A first or second division pass in the latter qualifies a student for admission either to the University of Lesotho, Botswana and Swaziland, or to enter a General Certificate of Education (Advanced Level) course in the United Kingdom. The past, present and projected output of qualified secondary students is as follows:

	1961	1965	1971
Junior Certificate	67	111	350
C.S.C.			
(a) Divisions I and II	–	16	60
(b) Remainder	7	21	80

196. Although preference is given to younger applicants, 62% of the pupils in Form I are over sixteen and in the senior forms three-quarters of the pupils are twenty and over. Wastage of pupils is alarmingly high, 47% of those entering in 1962 failing to complete the Junior Certificate course in 1965. Only forty-three of the sixty-six teachers now employed in secondary schools are graduates.

197. There are nine secondary schools. In the Government school at Gaberones and in two schools run by missionary bodies standards are good and equipment is reasonably plentiful. Conditions in the remainder are far from satisfactory. In the latter there is a noticeable lack of accommodation for laboratories, libraries and workshops, and equipment is scanty. Only four of the schools provide boarding accommodation and pupils attending day schools at a distance from their homes – the majority – have to find their own accommodation in the district. This accommodation is often unsatisfactory and creates serious moral problems.

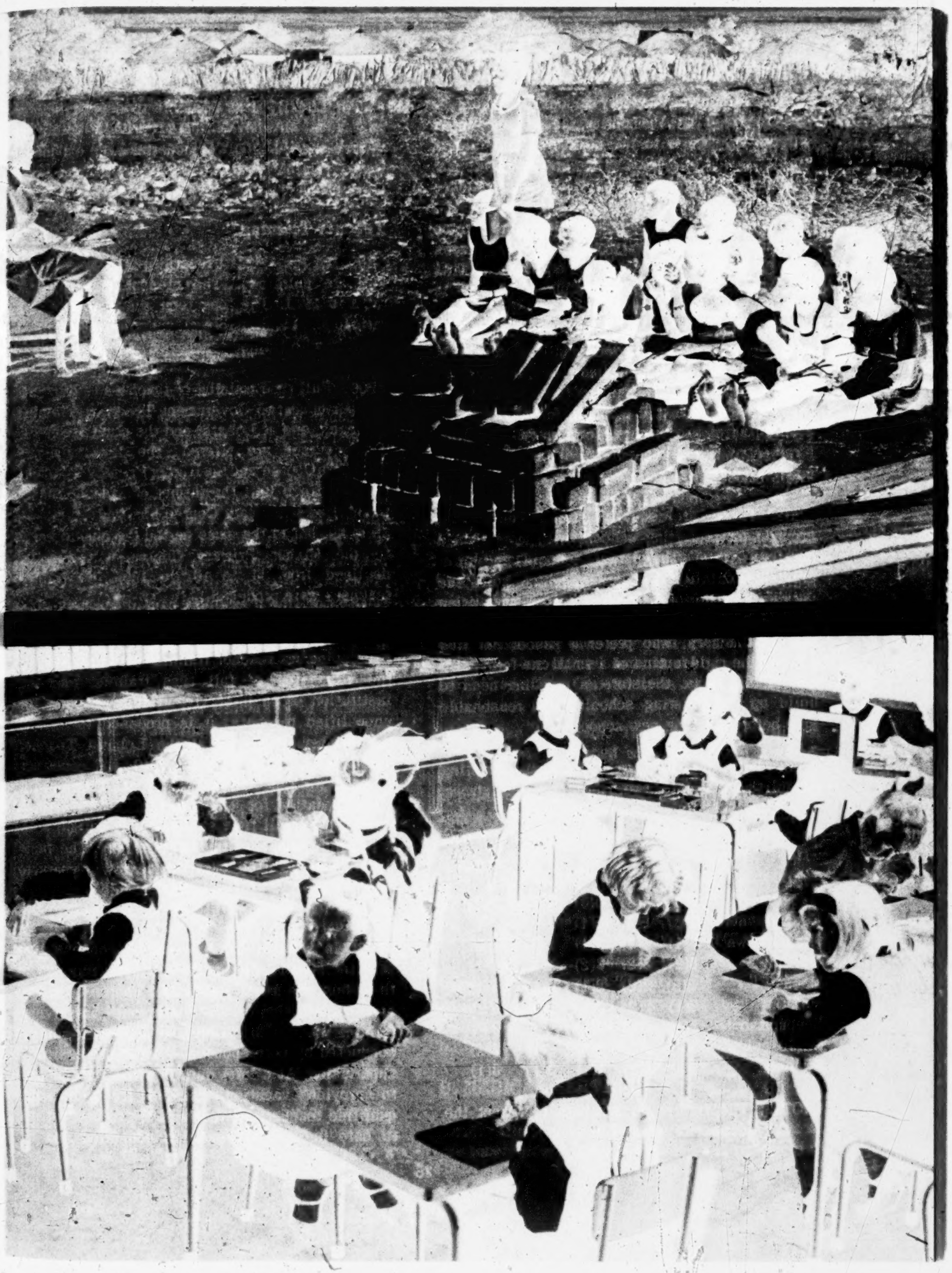
198. In order to meet the targets for high level manpower, the following enrolment is called for:

	Proposed (1972)	*Actual (1966)*
Form V	350	77
Form IV	360	81
Form III	735	308
Form II	710	498
Form I	775	535

199. Strenuous efforts would have to be made to overcome the present high wastage between Form I and Form V. Nevertheless some wastage is inevitable and it is recognised that, even at the best of times, there may be a 3% loss between Forms I and II, and 2% loss between Forms II and III. The completion of the Junior Certificate course marks an entry point into the Civil Service.

A village primary school class

Thornhill Primary School, Gaberones



200. Although secondary school classes of 20 are regarded as the optimum., Botswana must stretch its means to the uttermost. It is therefore proposed that the average size of the normal class should be about 30 pupils.

201. A country such as Botswana which depends for its prosperity on its cattle and crops must provide for the teaching of science. This calls for laboratories. The medium of learning is English; the curriculum followed is that determined by the Cambridge School Certificate. This calls for good libraries and qualified teachers. To be fully justified, expensive laboratories, libraries and teachers must be fully used. Hence the need, on economic grounds, for schools with a minimum of two or three form entry. A single-form entry school cannot be defended on economic grounds.

202. There are equally strong educational grounds for preferring schools with more than a one-form entry. The larger schools can offer greater flexibility of courses, which suits the varying aptitudes of the pupils, greater competition among the pupils themselves and a greater attraction to teachers, who prefer a school not tied down to the rigid routine of a small one-form entry school. There is, therefore, a pressing need to build up the existing schools to a reasonable size before building new schools.

203. It is proposed to develop the existing establishments into two, three or four stream secondary schools as follows:–

	Number of Forms				
	I	II	III	IV	V
Gaberones	3(3)	3(3)	3(0)	2(1)	2(0)
Kgari Sechele	2(1)	2(2)	2(1)	–	–
Francistown	4(1)	4(1)	4(1)	2(0)	2(0)
Moeding	3(2)	3(2)	3(2)	2(1)	2(1)
Moeng	2(2)	2(2)	2(1)	1(1)	1(1)
Molefi	2(1)	2(2)	2(1)	–	–
Seepapitso	2(1)	2(2)	2(1)	–	–
St. Joseph's	3(2)	3(2)	3(1)	2(1)	2(1)
Swaneng	4(3)	4(2)	4(1)	3(1)	3(1)

(NOTE: The figures in brackets represent the number of forms at present).

204. Luckily it is possible to depend in most instances on the dedicated private bodies in charge of the schools to undertake the expansion more efficiently and more cheaply than could Government.

Teacher Training:

205. Of the 1,624 teachers in primary schools, 825 are untrained. The present pupil/teacher ratio is 46:1. The long term aim is reduce this ratio to 35:1 and enable all schools to be staffed entirely with trained teachers.

206. Full time training of teachers is provided at present at two Government Teaching Training Colleges, one at Lobatsi and the other at Serowe. Two courses are offered; the lower Primary Teachers Course and the Higher Primary Teachers Course. Since 1961 the number of annual entrants to the Lower Primary Course has increased from 35 to 89, but in the same period the annual entry to the Higher Primary Course has actually declined from 11 to 10. In 1965, 80 trained teachers were produced.

207. The Government's immediate plan for developing its teacher training service involves the expansion of full time training and the institution of an in-service training scheme for unqualified teachers. It is proposed to expand the number of places at the Lobatsi Teacher Training College from 120 to 240, and construct a new training college at Francistown with accommodation for 240 students. By 1970 total enrolment of full time students will be 660 with a possible annual output of over 200. The facilities will be used over the next few years to produce 160 new teachers, and provide in-service courses for approximately the same number.

208. In service courses will be concentrated at Francistown: the scheme of training envisaged is a short one-month residential course of intensive instruction and continuous in-service training with private study and written exercises conducted by correspondence under professional supervision. At a later date it will be necessary to provide vacation courses for practising qualified teachers. If teachers are to be kept up to date in their approach to education and in

their use of new aids and techniques, they will require periodical refresher courses. This is particularly true in Botswana where teachers are often working in remote and isolated areas.

Higher Education:

209. At present there is no post-school certificate course offered at any of Botswana's secondary schools. Students proceeding to higher education are either sent to the University of Lesotho, Botswana and Swaziland or on scholarships overseas.

210. In order to meet the country's high level manpower needs the number of students proceeding annually to post-school certificate courses should be raised to 125, of whom a possible 50% may eventually become university graduates. So long as Botswana has only a few students in this category, it is rational to send them abroad for their studies. However as soon as there are more than 15 students wishing to specialise in science, or 30 students in arts subjects it will be rational for Botswana to develop its own sixth form facilities at the Government Secondary School in Gaberones.

211. The future of the University of Lesotho, Botswana and Swaziland is under review. There is a need to gear the activities of this institution more closely to the practical needs of the three countries. If the University is to belong truly to the three participant countries it is important for the University to have a physical presence in each of the countries.

212. The number of Batswana students now studying at this University is 31. The total recurrent costs of the University and bursaries met by Government is over R110,000, giving a cost per student of over R3,600 per annum. It is evident that a country as poor as Botswana cannot afford such expensive education and whilst the Government is anxious that the University should continue, the University must obtain overseas aid to reduce the recurrent burden falling on the Botswana Treasury. The situation will improve as the number of students increases but for very many years the number of Batswana at ULBS will remain low. By 1975 it is unlikely this the number will have risen to above 100, whilst a university requires at least ten times that number to become an economically viable institution.

213. Technical and Vocational Training is, with the exception of the Homecraft School, concentrated at the Botswana Training Centre at Gaberones. The Centre, which also includes a Commerce and Adult Education School is partly residential with accommodation for some 150 students. In 1965 about 700 students attended courses varying from one week to five months. Training at the trade school is given in such skills as carpentry and joining, brick laying, maintenance and repair work and elementary electrical and mechanical engineering. The Commerce and Adult Education School offers typing, clerical and executive courses.

214. The Centre is concerned with the in-service training of Government employees, but introductory courses for students seeking employment either with Government or private firms are also provided. Courses leading to external examinations, including those of the City and Guilds (London Institute) are offered and, at the lower level, a local Trade Test Certificate is awarded.

215. The Botswana Training Centre will be progressively expanded with priority being given to longer courses for technicians and to the provision of training in accountancy and public administration. Botswana cannot afford to duplicate training which may already be available in neighbouring countries (Zambia, Lesotho, Swaziland etc) but much of the training of sub-professional cadres can only be done within the country. In cases where this type of training can be carried out more cheaply and efficiently in Botswana, the necessary provision would be made at the Botswana Training Centre. The centralisation of technical training facilities in Gaberones will enable the best use of staff, buildings and equipment.

B. MEDICAL SERVICES

216. The main diseases prevalent in Botswana are tuberculosis, gastro-enteritis and pneumonia.

During periods of drought, malnutrition, particularly among children, is frequently found. Malaria is endemic in Ngamiland and Chobe, and, when there are heavy rains, epidemics occur in the south. Ngamiland is infected with sleeping sickness. Bilharzia, both haemotobium and mansoni, occurs in the east and in small pockets in the swamps.

217. There is one registered doctor per 26,000 of population, and two hospital beds per 1,000 inhabitants. There are seven small hospitals and thirteen health centres. In addition there are eighty-three dispensaries, the majority of which are without resident staff. The few doctors and the large distances involved make it impossible for medical officers to visit all the clinics as frequently as is necessary.

218. There are few specialist facilities, and no Government dentist. These factors all tend to lower the efficacy of the existing expenditures on medical facilities and to precipitate costly emergencies (such as the 1964 smallpox epidemic). The effect on the economy is depressing.

219. The Government's policy is to bring existing services and facilities up to a minimum medical standard, to provide the more simple facilities for specialist medical and surgical treatment, which are currently only available in the Republic of South Africa and in Rhodesia at great cost, and to increase the mobility of the field staff. It is also proposed to start a Health Education Service.

220. Botswana's hospitals and health clinics were originally designed as cottage hospitals and, during the years, the number of beds has increased without an equivalent increase in domestic facilities and staff quarters. The resul is that the staff quarters are in many instance grossly inadequate; laundry is often washed i the open and cooking in some places is done i lean-to shelters.

221. Previously Impilo Hospital, Bulawayo provided free hospital accommodation and specia list treatment for Batswana. Recently charge have been introduced and a deposit demanded o admission. A similar procedure is practised i the Republic of South Africa. The Governmen therefore intends to equip the new Gaberone Hospital with surgical wards to enable mor difficult and complicated operations to be carrie out. In this way the majority of the patient requiring specialist attention will be treate locally at a fraction of the present cost.

222. The purpose of the Health Educatio Scheme is to train local technical staff to teac Health Education. A pilot area will be used as a training ground for all field staff who will late be able to disseminate Health Education through out the country.

222. In the provision of medical facilities the Government is forced to rely heavily on the missionary bodies. It cannot be shown statistically that a given level of expenditure on medical services will produce a given return. It is, however, evident that unless the present organisation and medical institutions are improved the funds at present devoted to the medical services cannot be efficiently employed. The Government therefore proposes to make a variety of improvements in existing institutions as explained in Part II.

Chapter IX—General Administration

Local Government Administration:

224. The history of Local Government until recently has been almost entirely associated with the Chieftainship. Chiefs were both the national and local leaders. As the tribal organizations became more complex and assumed new functions which were not simply aspects of tribal customary law, and as the needs of a settled community expanded, the Chiefs acquired additional responsibilities which in a society less firmly based on tradition and tribalism would long before now have passed to non-traditional, specially-created organs of local government.

225. Although tribal councils functioned effectively in some districts, the system essentially remained one of personal rule by the Chief closely associated with and aided by the Central Government, which acted to a great extent through the District Commissioners. The small European population looked almost entirely to Central Government and the District Commissioner for the provision of public services, except in Francistown where there was a township authority. Recently, it became apparent that Botswana's rapid constitutional advance at the centre should be matched by an efficient and democratic system of Local Government.

226. The Legislative Council, in November, 1964, agreed to the reform and re-organisation of Local Government. The policy was, in essence to set up elected councils with executive powers, creating a non-racial representative and responsible system of Local Government as a natural development for the existing tribal administration.

227. Botswana has been divided into nine district council areas and three town council areas. Following the local government elections which were held in June of this year, based on adult universal suffrage, the new councils were established on the 1st July, 1966. Elected councillors form the substantial majority in all areas, but provision has also been made for the appointment of some nominated members.

228. The main source of revenue for the new councils is the Local Government Tax which was introduced on the 1st January, 1966 supplemented as necessary by Central Government grants. This new tax is a non-racial system which replaces the old African Basic Tax, the Graded Tax and the non-African Personal Tax Laws.

229. The position has therefore been reached where in each area of the country there is a democratically elected body with important local government functions, with the machinery at its disposal for utilising substantial external aid, and able to contribute towards the development of the country as a whole by its ability to mobilise self-help in its various forms. Almost every council has a special committee responsible for Community Development, through which it is hoped substantial progress will be made in the building of classrooms, teachers' quarters, small dams, roads and similar works.

230. The main functions of the local authorities include primary education, water supplies, communications and health and sanitation.

231. (a) *Primary Education* – Teachers are employed by local councils, and all the detailed administrative work connected with the provision of a primary education service is undertaken by them.

(b) *Water Supplies* – Rural boreholes are maintained by local authorities who employ the pumping staff. Capital is required for the drilling of new bores and also for the construction of small dams.

(c) *Communications* – The majority of local councils do not possess the necessary equipment to construct or improve roads, and the main contribution envisaged at this stage is manual labour provided by self-help schemes of one kind or another.

(d) *Health and Sanitation* – Much can be done at the local level regarding the provision of

sanitary services and the implementation of measures to safeguard and protect public health, and now that legislation exists for this purpose early action will be taken in this field.

232. It is intended that each District Council should formulate its own local development plan proposing projects to be implemented during the next five years, establishing priorities and setting targets for revenue collections. These plans will be taken into account in the preparation of the comprehensive Five Year Development Plan 1968/73.

Community Development:

233. The Government recognises that the traditional attitudes and practices of the vast majority of Batswana will have to change before a real breakthrough in the development of the rural economy is possible. The general level of receptivity to new ideas and techniques on the part of the peasant farmers must be raised. Further changes in social concepts will be required, for example, to achieve an increase in productivity and income from the livestock sector comparable to that already achieved with pupil farmers.

234. The Government is also aware that much progress can be achieved and a noticeable improvement made in the standard of living of the people through their own efforts – by self-help. It is necessary to mobilise the people, through the work of the Community Development Department and other avenues of rural education, to improve the conditions in which they live.

235. The Community Development Department is currently playing a key role in the administration of the Food For Work (Ipelegeng) programme. Since August, 1965 the World Food Programme has supplied foodstuffs for those hardest hit by the drought. The policy has been to provide food in return for work on community development projects, such as destumping of lands, building of teachers' quarters, school classrooms and small dams, repair and construction of rural roads and similar useful work.

236. The present size of the Community Development Department is totally inadequate to meet the tasks to be done. It is, therefore, proposed in this Plan to expand the field organisation. Because funds are not available from internal revenue, this expansion has been included as a development scheme and is described in Part II. The objective is to increase the number of community development workers from a mere handful to over one hundred to give nationwide coverage. Each village of any importance should have a Community Development Assistant permanently resident; they are to be employed by local authorities with financial assistance from Central Government. Under this system the staff of the technical departments, such as the Agriculture Department, would be able to concentrate their efforts on their specialised problems and be able to count on ready assistance in the field from the Community Development Assistants to break down local prejudices and prepare a favourable social climate for development.

237. An important proposal made in this Plan relating to Community Development is for the creation of a Youth Service. The Government is well aware, however, that precipitate action in this field in other African countries at the time of independence created serious political problems. It is not wise to mobilise young people unless their energies and interests can be channelled into productive activities. Even on a modest scale of Youth Service is likely to be an expensive proposition for which Botswana does not itself have the funds. These will have to be raised from friendly countries. The Youth Service must be planned with care and caution, as costly mistakes cannot be afforded. An experienced Youth Adviser is being recruited from overseas; he will be required to draw up detailed plans for a Youth Service.

238. Another Community Development project planned is the formation of a Home Economics Mobile Unit. In the past few years there has been a rapid multiplication of women's groups which provides an excellent means of communication with housewives and mothers. It is now proposed to establish a mobile unit consisting of a Home Economics Tutor and a vehicle equipped to give courses and demonstrations on home sanitation, nutrition, child care and similar subjects

to women's groups throughout the country. Local persons will be trained in this work.

Police:

239. The Botswana Police Force has been maintained at a standard necessary to provide adequate protection to the public having regard to its position as a dependant Territory able to rely on the resources of the protecting Power. On independence, therefore, to afford adequate policing, especially in the sparsely populated areas which are to be developed, and to maintain the confidence of the public and potential investors, it is essential that the existing force be strengthened.

Prisons:

240. At present prisons are overcrowded as a result of shortage of funds in the past and there are no resources available for the rehabilitation of prisoners.

241. One way in which the prison population may be decreased will be through the introduction of an extra-mural labour scheme. Instead of receiving prison sentences offenders will be attached to local autho. ties for whom they will have to work in return for rations. Due to this scheme any increase in the number of offenders will not create a proportional demand for funds by the Prison Department. But additional capital and recurrent expenditures will be required during the next three years to reduce the warder-prisoner ratio in the closed prisons, to provide workshop and welfare facilities and housing for prison staff.

External Affairs:

242. A country with such scant resources as Botswana cannot afford to maintain embassies in all the capitals of the world. Nevertheless it is considered necessary to have representatives in key places to safeguard the nation's interests. It is therefore proposed to locate diplomatic missions in four places – United Nations, Britain, United States and a roving Ambassador in Africa. These will all be restricted to the most modest establishments considered practical.

Information and Broadcasting:

243. The Information Service has only recently been established in Botswana and the department is still at an early stage in its development. Further capital is required in particular to enable the broadcasting section to move out of its present temporary office and studio accommodation, to purchase additional equipment and to construct housing for staff.

244. Botswana certainly cannot afford a lavish information service. Approximately 75% of the population are illiterate; the only practical means of mass communication with these people is therefore through the medium of the radio. But it is important for the implementation of this Plan for people to be informed of the policies of the Government. Broadcasting must be concerned essentially with this task. There are two special projects which are of particular importance; the Agricultural Broadcasting Scheme and the Educational Broadcasting Scheme. Broadcasting has a valuable use as a relatively inexpensive method of disseminating agricultural marketing information, and as an adjunct to agricultural extension work and primary school teaching. The Freedom from Hunger Campaign (United Kingdom) have generously donated funds for the purchase of one thousand transistor radio sets to be distributed mainly to Agricultural Demonstrators and primary schools. In June, 1966 a new 10kw transmitter was brought into operation capable of covering the whole country.

245. At present only half-an-hour of broadcasting is devoted weekly to agricultural topics. Farmers are hard to reach and much field work will be necessary to devise the most satisfactory methods of communicating vital agricultural information. A specialist unit is to be created responsible for producing, as soon as possible, fourteen hours of broadcasting a week.

246. Schools broadcasting is intended to be a major feature of Radio Botswana. As soon as the Primary Schools have each received their radio sets, authoritative instruction in elementary English will be provided; five and a half hours per week would be feasible immediately. A

schools broadcasting unit is to be formed responsible for producing local material as well as adapting school programmes obtained from abroad.

Training and Localisation:

247. Political advance leading to independence has outstripped educational progress and the demand for higher level manpower to provide trained leaders and to replace expatriates in Government service far exceeds supply. The Government's policy is to localise the civil service as fast as is possible without jeopardising the standard of administration. To achieve this objective an intensive programme of training will be necessary, both to upgrade the qualifications of serving officers and to train school leavers to replace expatriate officers.

248. In addition to the provision made for tec
nical and sub-professional training at the B
tswana Training Centre outlined in Chapter VI
a number of departments have their own programm
of in-service training. For example the Polic
Department runs both a basic training course fo
recruits and in-service training courses; th
Agriculture Department is to establish a demons
trator training college at Gaberones and th
Veterinary Department runs basic courses i
disease control and veterinary administration
More advanced training is obtained by sendin
suitable officers on courses overseas. For this
purpose provision is made in the recurrent budge
for eighteen supernumerary holding posts at the
super scale and administrative and professional
levels to permit persons on the permanent esta-
blishment to be away from their posts for extended
periods without disrupting the service.

Chapter X—Financial Aspects of the Plan

Financial Policy:

249. For the past ten years Botswana has been receiving a grant-in-aid to balance its recurrent budget. In 1966/67 the grant-in-aid totalled R6.1 million. In addition the country received grants from the Colonial Development and Welfare Fund for 1966/67 totalling R3.1 million, about half of which was used to finance expenditure of a continuing nature normally carried on the recurrent budget.

250. Botswana is in the position of achieving political independence while having little prospect of attaining economic independence for some years to come. Even with the most austere taxation the ordinary budget could only be balanced by a major retrenchment of services and by bringing all development to a halt.

251. The Government is thus faced with two alternatives; either to seek from donor countries budgetary aid not only to enable existing services to be maintained, but also to meet the recurrent costs generated by the implementation of development projects, or to reconcile itself to the prospect of prolonged stagnation at subsistence level. An analysis of the prospects for development indicates that Botswana has the potential to achieve budgetary self-sufficiency under conditions of growth provided that the rate of development is much accelerated. The implementation of the development programme described in this Plan will be the first step towards achieving this objective.

252. A development plan, if it is to be practicable, must be formulated within the limits of available resources, human, physical and financial. Since Botswana is entirely dependent on donor countries for finance for the Plan, the size of the development programme proposed cannot be determined simply by consideration of the availability of finance. The reason for this is obvious. Until now almost all outside financial assistance has come from the United Kingdom; with the advent of independence it is anticipated that many other countries will make offers of assistance, but at the present juncture the extent of this assistance is not known. It is indeed hoped that the presentation of a carefully prepared development plan will encourage donor countries to provide finance for it.

253. The scope of the Transitional Plan has been guided by the range of development projects capable of being implemented within the next two years. The choice of projects to be included has been governed by the policies and priorities set out in Chapter II. The size of the development programme has been defined by consideration of the available trained manpower and the physical capacity of the economy to undertake immediate development.

254. Since a long term objective is budgetary self-sufficiency, emphasis has been given to infrastructural development which will enable productive investment to take place. In the preparation of estimates of expenditure the greatest austerity has been observed and nothing inessential for the implementation of the development programme has been included.

Projections of Local Revenue:

255. An important feature of Botswana's system of public finance derives from its membership of the Southern African Customs Union and the Rand Currency Area, together with South Africa, South West Africa, Lesotho and Swaziland. The Government has, as a result, no control over customs and excise rates which are commonly the major source of government revenue in developing countries and powerful instruments of financial policy. Membership of the Rand Currency Area means no income accrues to the country from the investment of currency reserves and no direct investment attributable to the fiduciary element in the currency.

256. Under the terms of the Customs Union Agreement Botswana receives approximately

0.3% of the total customs and excise duty (excluding that on South African manufactured wines, spirits, and beer) collected within the Customs Area. It is anticipated that, if this arrangement is maintained, custom revenue received by Botswana will rise by a modest 5% p.a. reflecting the slow growth in customs revenue normally associated with a more advanced economy. This source of revenue represents only 20% of total internal revenue; in other developing countries it is normal to derive over 50% of government revenue from this source.

257. Table III gives details of the projected revenues from internal sources for the period April, 1966 to March, 1971. For most of the items the estimates are self explanatory. An important source of revenue is the special turnover tax obtained from the operations of the Botswana Meat Commission; the size of this item is dependent on the throughput of the abattoir and this in turn will depend on the extent of the drought. The size of the national herd has been greatly reduced by the recent drought and as a result revenue is anticipated to fall from R734,000 this year to R500,000 next year and to R250,000 in 1968/69. Thereafter there is likely to be a recovery.

258. During the five year period 1966/71 it is estimated that revenue from internal sources will rise from under R5.5 million, to over R6.6 million giving an annual increase of approximately 5%. Most of the development expenditure will have little immediate effect on the growth of Government revenue; the benefit of government investment over the next five years will accrue in the following decade. For example capital spent on the Shashi Complex will begin to yield direct revenue in the early 1970's, while investment in secondary schools will take even longer to mature.

259. It is recognised that Botswana cannot expect other countries to make any financial sacrifice for her unless she herself contributes the most possible towards development. The Government proposes to raise additional revenue by increasing the level of taxation. Fiscal policy, however, must never be considered simply from the point of view of raising revenue for the Exchequer. This is particularly true in the cas of Botswana which has almost no possibility using monetary controls to guide economic deve lopment. Fiscal policy must therefore be use consciously as a weapon of Government policy t stimulate and direct the economy. Fiscal incen tives are a relative matter and Botswana's "open economy is greatly affected by the rates of taxa tion pertaining in the Republic of South Africa Botswana must compete with South Africa fo private investment essential for her developmen and she simply cannot afford to ignore the disin centives that would result from an unfavourabl differential in the rates of taxation.

260. The Government considers that a numbe of changes are desirable to increase incentive for new investment without decreasing overa revenue. Furthermore it is proposed to raise ove R100,000 next year by the imposition of additiona taxation of the type which does not act as a dis incentive to investment.

261. An important economy could be achieve by discontinuing the subsidies on water an housing provided to civil servants. The Govern ment intends that these should be phased ou over a number of years, and that local official should be encouraged to purchase their ow houses through a special home ownership scheme

National Development Bank:

262. Reference has already been made in Chapters II and VI to the new role to be played by the National Development Bank in promoting agricultural, commercial and industrial activities by offering special credit facilities. The British Economic Survey Mission (1965) observed that "the activities of the commercial banks are regulated in general terms by the financial and credit policies adopted by the Government of the Republic of South Africa. At present the credit situation is tight so that it is difficult if not impossible to secure credit through the banking system for projects in Bechuanaland." It is thus vitally necessary for Botswana to establish an effective national credit institution through which Government may encourage investment and guide development.

263. The National Development Bank has not yet become the dynamic institution it must be. The Government has recently passed new legislation to widen the scope of the Bank's operations and, in particular, to increase its powers in regard to securities to permit more enterprising lending. The staff of the Bank will be strengthened and its headquarters moved to Gaberones.

264. In determining its policy with regard to the Bank, the Government has benefited from the advice of a United Nations Credit Adviser, Mr. W.N. Spall. Among his recommendations, which the Government has accepted and intends to implement, are the following:–

(a) The Bank must adopt a policy which reflects the policies and priorities of Government.

(b) The scope of the Bank must be widened to embrace loans for agriculture, trade, industry and housing.

(c) Greater emphasis should be placed on loans to small farmers and on the acceptance of more unorthodox security, such as character loans.

(d) The Bank should be regarded as the central agency for the issue of credit and as far as possible all Government credit should be channelled through this institution.

(e) Loans should, as far as possible, be issued in kind and not in cash. The Bank should pay for goods or services supplied to borrowers, who should handle as little cash as possible.

(f) One of the best and cheapest methods for the Bank to issue a large number of small loans is through the medium of properly organised and controlled co-operative societies. Cooperative credit should therefore be encouraged and the Cooperative Development Department strengthened to facilitate this.

265. A summary of the projected capital requirements of the National Development Bank is given below:

CAPITAL REQUIREMENTS OF THE NATIONAL DEVELOPMENT BANK

(Rs' 000)

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
(1) Boreholes	166	200	200	200	200
(2) Agricultural medium term credit	275	60	90	120	140
(3) Agricultural seasonal credit	–	400	490	610	750
(4) Cooperatives	–	90	108	142	170
(5) Hainaveld Scheme	–	66	66	66	–
(6) Commerce & Industry	508	250	250	500	500
(7) Low Cost Housing	–	375	–	375	–
(8) Mortgage Finance Housing	–	130	130	130	130
Bad Debts	4	13	46	50	80
Repayments	35	528	726	952	1,205
Servicing of loans granted to N.D.B.	–	42	85	400	450
Net Income	35	486	641	552	755

266. In calculating these requirements it has been assumed that bad debts will amount to 2% p.a. on seasonal agricultural credit and to 10% for all other loans repayments. The servicing of loans has been estimated on the basis of loans bearing an interest of 6% p.a. repayable over 25 years.

267. In order to raise finance, the Bank is empowered to issue Savings Bonds or Development Bonds. By doing so it is intended that local savings will be mobilised for the benefit of the development of the country, and that savings now invested abroad will flow back into Botswana. Furthermore it is proposed that 50% of Post Office Savings will be lent to the National Development Bank.

Finance from External Sources:

268. Table IV shows finance from external sources which has either been received or is under negotiation both for the recurrent budget and for development.

269. The United Kingdom Government has announced that grants and loans already agreed for the current year will remain unaffected by the advent of independence; in addition a total of R26 million has been offered for the three year period 1967/70. The allocation of this latter sum between grant-in-aid to meet the budget deficit and development finance is still to be discussed. The figures for grant-in-aid (U.K.) given in the summary of financial projections is a provisional allocation and is subject to further negotiation. United Kingdom Government budgetary assistance for the period after 1969/70 has not been negotiated, but assurances have been given that continuing financial assistance will be offered.

270. Commonwealth Development and Welfare Funds are normally made available to colonial territories for expenditure on development projects. However, in the case of the Bechuanaland Protectorate, the term "development" was widely interpreted. Expenditure of a recurrent nature – for example, salaries of teachers, maintenance of medical services and agricultural extension work – was met from the C.D. & W. allocation. In 1966/67 about half the total approved C.D. & W. expenditure was of a recurrent nature and has been reclassified as such in the tables in this Plan.

271. The International Development Association approved a R2.6 million loan in 1964 to meet the cost of upgrading and improving a number of main roads – mainly the North-South Trunk Road and the Maun-Francistown Trunk Road. The final phase of this project is being completed this year.

272. The Freedom From Hunger Campaign Committee (U.K.) has recently approved agricultural projects involving a grant totalling some R907,000. The Botswana Government's counterpart contribution will be met from the financial assistance offered by the United Kingdom Government. The Oxford Famine Relief Committee is being asked to support one or two small agricultural projects; in the past OXFAM has enabled important projects in the fields of animal and crop husbandry to be initiated.

273. An application has been submitted to the United Nations Special Fund for a hydrological survey and pre-investment study of the Okavango Delta Drainage System and Limpopo River Watershed. The contribution requested from the Special Fund amounts to R650,000 and an equal counterpart contribution will be provided by the Botswana Government. A final decision on this application is expected in January, 1967.

274. The Swedish International Development Authority has provided a grant for the construction of a new Teacher Training College at Francistown which will specialise in in-service training. Swedish funds are to be channelled through UNESCO which is assisting with the planning and implementation of the project.

Public Expenditure Projections:

275. Estimates of the recurrent expenditure needed to maintain existing services and of the recurrent expenditure which will be generated by the implementation of development projects are given in Tables V and VI. The former includes provision for some expansion in the case of those departments which would otherwise be unable to

ıtinue to maintain the present level of service. is is particularly true of the Surveyor-General's partment, Public Works and the Accountant-neral's Department.

76. Table IX shows the allocation of recurrent blic expenditure between different sectors of economy. A large part of the expenditure on riculture and Wildlife arises from the need to intain a costly programme of disease control, the high percentage spent on General Admi-tration is due to the large size of Botswana its sparse population.

77. A summary of capital expenditure on deve-ment projects by departments is given in ble VII. This includes terminating projects ch are listed in Table XI, and new and conti-ng development projects summarised in Table . The definition of capital expenditure used hese tables covers all expenditure relating to planning and implementation of a project ether for building, for labour or for staff, etc.) excludes any continuing recurrent commitment ch will result from the completion of the ject. For example, all expenditure on a pre-estment survey, whatever is involved, is cate-ised as "capital", whilst for a project such the construction of a secondary school, the ning and maintenance costs are debited to the urrent budget. A number of training schemes being proposed in the development budget ch, because of their limited duration, are egorised as capital expenditure.

78. In this Plan only those projects to be dertaken in the period 1966/69 are specified. e projected increase in capital expenditure in second year of the Plan in the public sector approximately R3.5 million (or some 54%). In following year there is a slight fall and, reafter, it is planned that expenditure on deve-ment should reach R10 million per annum. jects to be started in 1969/71 have not been cified, since further investigations are required ore sound projections can be made. The rise expenditure between this year and next year resents the accelerated rate of development sidered necessary to take the country along a h leading to budgetary self-sufficiency.

279. Table VIII illustrates the allocation of public investment between the different sectors of the economy. It will be noted that capital expenditure on infrastructure and water resources absorbs over 70% of the budget. This is mainly explained by the necessity to improve water supplies and communications and by the need to establish a soundly based system of secondary education to provide the trained manpower required to service the economy. The provision of public funds for commerce and industry is relatively small due to the role envisaged for private investment in meeting the needs in this sector. The dangers of excessive emphasis being placed on infrastructure investment are recognised; this sector, however, has been neglected in the past and considerable expenditure is now required as a prerequisite for agricultural, commercial and industrial development.

FINANCIAL SUMMARY

280. A summary of the projections of revenue and expenditure in the public sector is given in Table X. The fall in recurrent revenue between 1966/67 and 1967/68 is due to extraodinary expenditure in the former year on drought and famine relief. Excluding this item the increase in recurrent expenditure amounts to 8% p.a., which is a moderate rate of growth in view of the high level of capital investment envisaged.

281. The growing deficit on the recurrent budget would appear to contradict the long term objective of budgetary self-sufficiency. However, it is anticipated that internal revenue will grow faster than recurrent expenditure after 1970, when the national herd will have recovered from the devastation of the past five years' drought and such major investments as the Shashi Complex will start yielding substantial tax revenue.

282. The shortfall on the capital budget indicates that the development programme remains largely unfinanced. Provision is made for the mobilisation of internal resources (Post Office Savings Bank, etc.) to meet the cost of development, but it cannot be expected that local funds will cover more than a small part of the substantial investment proposed. The remainder must be financed from external sources.

TABLE III

ESTIMATED REVENUE FROM INTERNAL SOURCES (R'000)

SOURCE	*1966/67*	*1967/68*	*1968/69*	*1969/70*	*1970/71*	*Explanation*
Customs Duties	378	397	416	437	460	Annual increase at 5% compound
Duty on South African Spirits, Beer, Wines	281	316	356	400	450	Annual increase at 12% compound.
Excise Duties	427	485	533	587	646	Annual increase at 10% compound.
Income Tax	589	618	649	682	716	Annual increase at 5% compound.
Turnover Tax (BMC)	734	500	250	300	350	Determined by throughput of the abattoir, which is in turn determined by the drought.
Export Taxes	190	193	193	209	227	Various
Licences and other Taxes	295	319	345	373	404	Various
Earnings of Departments	1,382	1,452	1,511	1,594	1,674	Various
Reimbursements	1,036	1,164	1,207	1,332	1,447	Various
Additional new Taxes	–	110	124	137	154	Various
Miscellaneous	149	150	150	150	150	Various
Total Internal Revenue	**5,461**	**5,703**	**5,734**	**6,201**	**6,678**	

TABLE IV

REVENUE FROM EXTERNAL SOURCES IN SIGHT (R'000)

SOURCE	*USE*	*1966/67*	*1967/68*	*1968/69*	*1969/70*
RECURRENT BUDGET:					
U.K. Grant-in-aid	To meet Budget Deficit	5,737	6,800	7,000	7,200
Colonial Development and Welfare Fund	Various	1,462	–	–	–
British Technical Assistance	Staff	17	–	–	–
Oxford Committee for Famine Relief	Agricultural Development	31	–	–	–
Freedom From Hunger Campaign (U.K.)	Agricultural Development	32	–	–	–
	Total	**7,279**	**6,800**	**7,000**	**7,200**
DEVELOPMENT BUDGET					
Colonial Development and Welfare Fund	Various	1,597	–	–	–
U.K. Exchequer Loan	Water Supplies	514	39	13	–
U.K. Exchequer Loan	Purchase of Breeding Stock	150	–	–	–
U.K. Exchequer Loan	Boreholes	166	–	–	–
U.K. Exchequer Loan	Housing	210	–	–	–
U.K. Exchequer Loan	Telecommunications	59	–	–	–
U.K. Grant	Housing and Administrative Buildings	395	–	–	–
U.K. Development Finance	Unspecified	–	2,200	1,400	1,400
British Council	National Library	31	–	–	–
Freedom From Hunger Campaign (U.K.)	Dam Construction Unit	336	–	–	–
Freedom From Hunger Campaign (U.K.)	Agricultural Demonstrator College	205	205	–	–
Freedom From Hunger Campaign (U.K.)	Farmers' Short Course Centre	–	38	–	–
Freedom From Hunger Campaign (U.K.)	Agricultural & Educational Broadcasting	23	–	–	–
Freedom From Hunger Campaign (U.K.)	Agricultural Credit	–	100	–	–
International Development Association	Development of Roads	1,508	–	–	–
U.N. Special Fund	Hydrological Survey	–	331	195	124
Swedish International Development Authority	Francistown Teacher Training College	20	298	23	–
Oxford Committee for Famine Relief	Unspecified	–	49	–	–
Anglo-American Corporation	National Library	16	–	–	–
Chamber of Mines	Medical Services	5	–	–	–
	Total	**5,235**	**3,260**	**1,631**	**1,524**
	Grand Total	**12,514**	**10,060**	**8,631**	**8,724**

TABLE V

RECURRENT EXPENDITURE TO MAINTAIN EXISTING SERVICES (R'000)

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/7*
Office of the President	286	387	377	387	36
Administration of Justice	64	66	69	73	7
Deeds Registry	7	8	8	9	
Legislative Assembly	58	61	61	61	6
House of Chiefs	8	10	10	10	1
Attorney-General	42	47	47	49	4
Public Service Commission	23	26	27	28	2
Audit	37	44	40	45	4
Ministry of Home Affairs	53	56	58	61	6
Immigration	54	59	62	65	6
Information	125	127	133	139	14
Police	847	892	928	979	1,02
Prisons	121	136	140	152	16
Ministry of Finance	188	320	316	303	30
Accountant-General	160	210	200	230	23
Commissioner of Revenue	75	98	101	114	11
Central Stores	79	75	79	94	8
Pensions and Gratuities	523	504	602	542	52
Public Debt	649	804	816	926	98
Ministry of Agriculture	44	61	69	75	7
Co-operative Development	30	35	39	44	5
Forests	35	36	38	40	4
Tsetse Fly Control	218	219	220	222	22
Agriculture Department	584	605	603	609	64
Veterinary	869	917	945	964	98
Ministry of Labour and Social Services	40	48	50	55	5
Education	1,631	1,787	1,845	1,933	2,01
Medical Services	726	821	869	917	98
Botswana Training Centre	92	100	105	110	11
Ministry of Local Government	31	35	37	38	4
Community Development	56	55	55	60	6
District Administration	203	210	220	230	24
Local Government Audit	10	16	16	16	1
Subsidies to Local Authorities	177	386	370	355	34
Ministry of Commerce, Industry & Water Affairs	26	35	35	37	3
Game	61	74	72	75	7
Printing	71	106	113	109	11
Geological Survey	192	230	218	252	24
Underground Water Development	159	152	167	207	17
Water Branch	239	242	237	230	22
Ministry of Works and Communications	67	67	64	61	5
Surveyor-General	77	115	122	128	13
Posts and Telegraphs	476	539	555	594	63
Public Works	980	1,150	1,206	1,289	1,28
Extraordinary Expenditure	2,300	–	–	–	–
Total	**12,793**	**11,962**	**12,345**	**12,918**	**13,24**

TABLE VI

SUMMARY OF RECURRENT EXPENDITURE DERIVING FROM NEW AND CONTINUING DEVELOPMENT PROJECTS BY DEPARTMENT (R'000)

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
1. Inter-departmental	–	–	–	–	86
2. Water Branch	–	13	17	20	20
3. Veterinary	–	5	5	5	5
4. Agriculture Department	–	179	248	289	337
5. Game	–	10	34	58	92
6. Geological Survey	–	40	42	44	46
7. Printing	–	–	–	–	–
8. National Development Bank	–	–	–	–	–
9. Co-operative Development	–	14	22	25	26
10. Public Works	–	25	56	73	88
11. Posts and Telegraphs	–	–	–	–	–
12. Surveyor-General	–	–	–	–	–
13. Education	–	156	300	371	407
14. Medical Service	–	57	85	90	95
15. Ministry of Labour and Social Services	–	14	14	15	15
16. Ministry of Local Government	–	10	19	20	21
17. Community Development	–	44	75	111	155
18. Ministry of Home Affairs	–	76	129	135	141
19. Information	–	13	15	16	16
Total	**–**	**655**	**1,062**	**1,271**	**1,550**

TABLE VII

SUMMARY OF CAPITAL EXPENDITURE ON DEVELOPMENT PROJECTS BY DEPARTMENT (R'000)

	1966 67	*1967 68*	*1968 69*	*1969 70*	*1970 71*
1. Inter-departmental	11	1,004	3,320	3,249	1,534
2. Water Branch	682	796	1,144	778	299
3. Veterinary	92	124	50	50	50
4. Agriculture Department	802	523	377	227	197
5. Game	12	64	77	59	32
6 Geological Survey	18	103	–	–	–
7 Printing	–	75	–	6	–
8. National Development Bank	949	1,571	1,334	2,143	1,890
9 Co-operative Development	33	41	15	11	8
10. Public Works	2,937	1,937	1,264	1,132	441
11. Posts and Telegraphs	63	352	95	–	–
12. Surveyor-General	–	73	37	37	14
13. Education	597	1,958	747	379	150
14. Medical Services	99	405	220	92	31
15. Ministry of Labour and Social Services	96	63	4	11	4
16. Ministry of Local Government	–	54	43	42	44
17. Community Development	149	288	131	142	91
18. Ministry of Home Affairs	–	437	29	59	37
19. Information	20	229	8	–	–
20. Unspecified	–	–	–	1,583	5,179
Total	**6,558**	**10,097**	**8,894**	**10,000**	**10,000**

TABLE VIII

SUMMARY OF CAPITAL EXPENDITURE BY SECTOR

	1966/69 (R'000)	%
Physical Infrastructure	9,629	37.5
Social Infrastructure	4,189	16.4
Water Resources	4,762	18.6
Agriculture and Wildlife	3,568	14.0
Commerce and Industry	2,005	7.9
General Administration	1,399	5.6
Total	**25,552**	**100.0**

TABLE IX

SUMMARY OF RECURRENT EXPENDITURE BY SECTOR

	1966/69 (R'000)	%
Physical Infrastructure	6,251	16
Social Infrastructure	9,674	24
Water Resources	1,238	3
Agriculture and Wildlife	6,151	15
Commerce and Industry	556	1
General Administration	8,999	23
Public Debt, Pensions & Gratuities	3,898	10
Famine Relief	2,051	5
Total	**38,817**	**100**

TABLE X

SUMMARY OF FINANCIAL PROJECTIONS (R'000)

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
RECURRENT BUDGET					
Recurrent expenditure to maintain existing services	12,793	11,962	12,345	12,918	13,241
Recurrent expenditure deriving from development projects	–	655	1,062	1,271	1,550
Total Recurrent Expenditure	**12,793**	**12,617**	**13,407**	**14,189**	**14,791**
Estimated revenue from internal sources	5,461	5,703	5,734	6,201	6,678
Revenue from external sources in sight	7,279	6,800	7,000	7,200	–
Revotes from 1965/66	53	–	–	–	–
Total Recurrent Revenue in Sight	**12,793**	**12,503**	**12,734**	**13,401**	**6,678**
Shortfall on the Recurrent Budget	**–**	**114**	**673**	**788**	**8,113**
DEVELOPMENT BUDGET					
Total Capital Expenditure on Development Projects	**6,558**	**10,097**	**8,894**	**10,000**	**10,000**
Development revenue in sight					
(a) External sources	5,235	3,260	1,631	1,524	–
(b) Commercial loans	617	–	–	–	–
(c) Cattle Export Levy Fund	20	20	20	20	20
(d) Development Fund	546	–	–	–	–
(e) Miscellaneous	15	–	–	–	–
(f) Net Income of N.D.B.	–	486	641	552	755
(g) Post Office Savings contribution to N.D.B.	–	120	120	40	40
(h) Sale of Crown Lands	125	100	100	100	100
Total Development Revenue in Sight	**6,558**	**3,986**	**2,512**	**2,236**	**915**
Shortfall on the Development Budget	**–**	**6,111**	**6,382**	**7,764**	**9,085**

PART II

Description of Development Projects

Tables

TABLE

XI Capital Expenditure on Terminating Development Projects 1

XII Capital Expenditure on Continuing and New Development Projects 1

XIII Recurrent Expenditure Deriving from Development Projects... 1

Introduction

In Part I a general analysis of the Botswana economy was presented, and the policies and priorities which have determined the composition of the programme of public expenditure over the next years described in this Plan were set out. In Part II the development projects to be undertaken by Central Government during the period 1966/69 are listed and short descriptions are given for both new and continuing schemes. Projects which will be terminated in the first year of the Plan are also listed, but no descriptions of these projects are given.

For ease of reference a system of classifying projects has been adopted. All new or continuing projects have a code number consisting of two capital letters (representing the department responsible for implementing the project) and two digits (representing the number of the project within the department). The code reference does not indicate the priority of a project. However, within a group of similar projects, the project given first is usually of higher priority than those that follow. At the end of each project description the capital cost and, below, the recurrent costs arising from the implementation of the project are given.

Interdepartmental Projects

ID01 Shashi Complex:

This project centres on the construction of a dam on the Shashi River capable of supplying nine million gallons of water per day. The dam will enable water to be provided for copper mining at Matsitama, for industrial and domestic uses in Francistown, Shashi Siding and Tonota, and for the irrigation of 4,000 acres of land In addition the complex will include the installation of a thermal power station near the dam, with a capacity of nine megawatts possibly supplied by coal mined from deposits near Palapye, and for the construction of the new roads which will be required

This essential infrastructure will form a basis for the developments of copper mining and of irrigation farming, and will enable a major industrial area to be created in North-East Botswana. In addition, it will supplement the existing but inadequate water and electricity supplies for Francistown and the other neighbouring population centres. The extraction of salt and soda ash from the brine deposists in the Sua Pan may also be undertaken

A suitable site for the construction of the dam has been located at Shashi Siding The Shashi Complex involves a total capital cost of R7.5 million, including 15% to cover fees, supervision and contingencies Of this total, 39% is for the dam and water supplies, 11% for irrigation and agricultural resettlement, 17% for electricity and 17% for roads The immediate requirement is for R350,000 to meet the costs of detailed pre-investment studies

The development of the Shashi Complex will provide employment for an estimated 3,000 to 4,000 persons as a result of the commencement of copper mining The establishment of a 4,000 acre irrigation scheme will provide permanent employment for a further 1,000 families. Direct and indirect revenue accruing to Government as a result of the creation of the Shashi Complex i expected to rise to some R800,000 p a. in th early 1970s.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970 7*
	R	*R*	*R*	*R*	*R*
Capital	–	350,000	3,000,000	3,000,000	1,500,(

ID02 Hydrological Survey:

The main objectives of this project are:

(a) to design and establish a basic network o hydrological and meteorological stations;

(b) to study the technical and economic feasi bility of alternative irrigation schemes;

(c) to carry out research and field investiga tions aimed at improving agricultural and land use practices;

(d) to train Batswana in hydrometry and hydro logy so as to make them eventually capable of manning the Hydrological Service.

The areas to be covered by the project include the Okavango River Delta drainage system and the Limpopo River Watershed. Detailed topographical, hydrological and agronomic surveys will be necessary.

An application to the United Nations Special Fund for financial and technical assistance for this project has been submitted. It has been proposed that the Special Fund contribution should amount to approximately R650,000 and that the survey should last three years. At the end of that period a national Hydrological Service will have been established and a number of the most promising irrigation schemes planned in detail.

	1966 67	*1967 68*	*1968 69*	*1969 70*	*1970 71*
	R	*R*	*R*	*R*	*R*
Capital	–	654,100	319,800	248,600	33,800
Recurrent	–	–	–	–	85,600

Water Branch

WB01 Borehole Maintenance Units:

As part of its plan for putting the supply of water on an economic basis, the Government would like either to see boreholes maintained and repaired by private individuals, or else to charge borehole users an economic fee for Government maintenance. Unfortunately, there are very few private individuals capable of repairing boreholes. It will not be possible immediately to recover full costs of Government's maintenance services; however, charges will be progressively increased until the units become fully self-supporting.

The thirteen mobile Maintenance Units now in existence cannot even keep up with the frequent breakdowns of borehole engines, much less provide the regular maintenance that could greatly reduce the rate of breakdown. It is therefore proposed to establish eleven more Borehole Maintenance Units so as to be able to properly maintain both the existing boreholes and those proposed in the Plan under the Borehole Repayment Scheme (ND01). Once these Units have been established, it is planned to institute and gradually increase maintenance charges until the Units become self-financing.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	91,000	61,400	12,000	12,000
Recurrent	–	13,400	17,400	19,500	19,500

WB02 Water Branch Training:

In a country where educational development has long been retarded, localization can be effected and rapid development can take place only if maximum use is made of all training possibilities.

In order to supplement the work of the Botswana Training Centre, it is necessary to have on-the-job training for mechanics, surveyors, draughtsmen and technical officers of the Water Branch. The need is particularly urgent now because of the rapid development of water supplies envisaged in the Plan and because of the expected departure of many expatriate officers.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	35,500	10,600	11,300	12,300

WB03 Water Development Planning:

It is vital to keep the investigations and planning of water development projects well in advance of implementation so that consultants and temporary staff can be engaged in time and estimates properly prepared. Furthermore, in many cases unforseen water needs arise, such as when unforseen mining, industrial or educational development occurs, and it is necessary to have money available to undertake investigations immediately.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	50,000	50,000	40,000	40,000

WB04 Gaberones Water Supply

Since the completion of the Gaberones Dam in 1965, the Capital has had available a source of up to 9 million gallons a day (m.g.d.), which is sufficient for the forseeable future. The rapid

growth of Gaberones has necessitated the expansion of the treatment works in 1966/67 from ½ m.g.d. to 1½ m.g.d., and it is expected that continued expansion of the treatment works, storage reservoirs and distribution mains will be necessary to keep pace with further increases in demand. It is, of course, most important that an inadequate water supply should not become a limiting factor on the commercial and industrial growth of Gaberones.

All of the projected capital improvements will be fully viable provided long term loans are available.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	270,000	20,000	25,000	100,000	175,000

WB05 Lobatsi Water Supply:

It is expected that the demand for water in Lobatsi, the chief industrial centre of Botswana, will increase considerably in the next few years, especially as the Botswana Meat Commission plans to expand the abattoir. The Nuane Dam stores sufficient water for the town, but additional pipelines, pumps, tanks, spillway gates etc. will be needed to maintain adequate supplies.

The planned capital expansion will be fully viable if long term loans can be secured.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	207,600	90,000	45,000	–	–

WB06 Mahalapye Dam:

Mahalapye is a growing town of 15,000 p and the main watering point in Botswana fo way locomotives. It houses a large secti the Agriculture Department, including an e mental station, as well as being the admin tive headquarters for the Tuli Block.

The water supply is drawn from the sand of the nearby Mahalapswe River which only f for a few days in the year. There is a na storage reservoir in the sand, but as this is 12 feet deep, it is totally inadequate to serv growing needs of the town and of the rail resulting in severe rationing during most o year. In addition, the water is the most unhe of any major town or village in Botswana.

Near Mahalapye is about 2,000 acres of gable soil, which may have the best irriga potential in eastern Botswana. A suitable site exist close to both the town and the irrig land, and investigations on it should be com ted in November 1966. The cost listed belo therefore only a preliminary estimate. Provi sufficient water can be sold to the railway to the irrigation scheme, the project has a g prospect of becoming economically viable.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/*
	R	*R*	*R*	*R*	*R*
Capital	–	200,000	450,000	250,000	

– (WB06 under 1970/71)

WB07 Molepolole Dam:

Molepolole, the Capital of the Bakwena tribe is the third largest town in Botswana, having population of over 30,000. It is served only b a number of poor yielding boreholes, resulting i perpetual crisis in meeting the demand for domes tic water. There are no prospects of additiona underground supplies.

There is, however, a nearby dam site which is presently under investigation by a consulting engineer whose report is expected in November, 1966. The figure included here is a preliminary estimate.

As much as possible of the cost of the dam would be recovered from the local inhabitants, but, in view of the general poverty resulting from the drought it is doubted whether the dam could be entirely self-financing. Nevertheless, in view of the social desirability of providing sufficient water to urban centres, this project is considered justifiable.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	60,000	60,000	–	–

WB08 Gaberones–Mochudi Pipeline:

Mochudi, the fourth largest town in Botswana, has a population of over 17,000 people and is the administrative centre of the Kgatleng District. Its water comes from borehole supplies which are relatively poor and not capable of substantial improvement. Although the Notwani River runs past the town, it only flows for a few days, or at most a few weeks in the year, and there are no suitable dam sites within economic distance. It is less expensive to pipe water from Gaberones, 25 miles away, and the pipeline could also serve villages and farms along the way.

Every effort will be made to collect an economic rate for the water, but as the Kgatleng has been an area severely hit by the drought (over 50% of the Bakgatla cattle have died), it is doubtful whether the full cost could be recovered from the local population.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	60,000	60,000	–	–

WB09 Kanye Dam:

Kanye, the administrative centre of the South Eastern District Council and of the Bangwaketse Tribe, is the second largest town of Botswana, with a population of 34,000 people. Underground water supplies, on which the town now depends are quite inadequate. The boreholes are drying up and attempts to find new underground sources have been unsuccesful. Unless a new source of water can be found, it it likely that the population will have to be dispersed to other villages.

There is no good dam site close to the town but there is one 12 miles away which is under detailed investigation by a consulting engineer whose report is expected in November, 1966. The figure included here is only a preliminary estimate. It is not expected that more than a small portion of the cost could be recovered from the inhabitants, but since the only alternative to the dam is moving possibly tens of thousands of people, the dam is considered to be the least expensive solution to the problem.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	–	300,000	300,000	–

WB10 Madabe Pipeline:

A dam has been constructed by the Rhodesian Government at Madabe on the Ramaquabane River which forms the boundary between Rhodesia and Botswana. At the request of the Botswana Government, the dam was built sufficiently large to supply water to both countries. The Botswana Government has contributed R18,400 to the cost of the dam and, in return, is entitled to the use of 186,000 gallons per day.

Money is now required to meet the cost of a pipeline from Madabe to Tsamaea Siding and Tsessebe Station in order to supply water to the railway. Rhodesia Railways require 12 million gallons per year and are prepared to pay an economic price for an assured supply. Watering points would be created at regular intervals along the pipeline to supply stock and domestic requirements.

The capital requirements, in addition to the R18,400 already spent, are R60,000. The anticipated net annual revenue is about R8,000 which can be used to meet the cost of servicing any loan used to finance the capital costs.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	60,000	–	–	–

WB11 Urban Water Supplies:

Although the water needs of the major urban centres are provided for in projects WB04 to WB09, there are equally severe water shortages in many of the smaller villages. This project provides for small dams at a number of the villages where the problem is most acute. The estimates included here are only approximate, as investigations are still being carried out.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	20,000	20,000	20,000	20,000

WB12 Water Storage and Reticulation (Mahalapye, Serowe, Maun):

This project, for which loan funds have already been found, is intended to improve the water situation in these three major centres by providing additional storage reservoirs and standpipes. The R19,300 for Mahalapye is only a stopgap measure until the dam can be built. The R24,000 for Serowe and R42,700 for Maun will be sufficient to provide adequate water supplies in these relatively fortunate towns.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	35,000	38,300	12,700	–	–

WB13 Rural Surface Water Supplies:

Although in recent years the emphasis in rural water development has been on boreholes, a concentrated attempt is now being made to conserve rural surface water supplies. In particular, the "Ipelegeng" (self-help) program has shown how much can be done by hand labour without expensive imported materials or machinery. But attempts at dam construction without proper technical guidance can be fruitless and even dangerous, and it it proposed to have an experienced engineer and two assistants available to guide and train the "Ipelegeng" leaders.

Another recent development with great promise is the construction of haffirs in natural catchment areas. However, a considerable amount of experimentation will have to be carried out before the optimal sizes, shapes and locations of the haffirs can be determined, and it is proposed to spend R10,000 per year on constructing experimental haffirs in areas where neither underground nor river water supplies are adequate.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	36,300	19,100	19,200	19,300

WB14 Borehole Equipping:

Although the provision of all new rural boreholes will be made under the Borehole Repayment Scheme (ND01), money will still be needed for the equipping of boreholes for schools, dispensaries, research stations and other services, as well as for a number of villages. The estimate is reduced year by year, as villagers will be asked to meet an increasing share of the cost of providing borehole water.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	35,000	30,000	25,000	20,000

Veterinary Department

VE01 South West Africa Border Fences:

A Boundary Commission, consisting of representatives of the Bechuanaland Protectorate Government and the South West Africa Administration, have recently agreed on the demarcation of their common border. The erection of border fences is considered by both parties to be necessary to prevent cattle straying from one country to the other.

The absence of a stock-proof fence between South West Africa and Botswana greatly enhances the danger to both countries of the spreading of Foot and Mouth Disease and other livestock diseases.

The allocation of costs between the two countries has also been agreed. The expenditure projected below covers only that part to be borne by the Botswana Government.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	104,000	–	–	–
Recurrent	–	5,000	5,000	5,000	5,000

VE02 Disease Control Fences:

Botswana is divided into four sections (Ngamiland, Western Bamangwato, Eastern Bamangwato, including the Tati and Tuli Block, and Southern Botswana) by veterinary fences designed to prevent the spread of diseases from an infected section to any other. However, as these are only single fences, it is sometimes possible for diseases to spread from one section to neighbouring ones. As a result, when there is Foot and Mouth Disease in the Rakops area of the Western Bamangwato, where it frequently occurs, importers will not accept beef from any of the three northern sections.

It is therefore proposed to construct a new fence running east-west from Ngamiland along the southern edge of the Makarikari Pan until it meets the Central Bamangwato Cordon Fence, plus a subsidiary fence running from the middle of the new fence down to the boundary between the Bamangwato Reserve and the Ghanzi Crown Lands. In this way buffer zones will be created between the Rakops area and the Eastern Bamangwato, so as to permit cattle export from the latter area (which contains about 40% of the national herd) when the former is infected.

This project will not begin until 1968/69 so as to permit the possible effects of these fences on game to be studied, and is phased over three years so as to enable the existing Veterinary staff to undertake the construction.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	–	30,000	30,000	30,000

VE03 Bull Subsidy Scheme:

The Veterinary Department has established two pedigree herds, one Afrikander and the other Brahman, with the aim of supplying improved bulls to stock-owners. The herds are based on a newly purchased farm near Lobatsi and at Ramathlabama. The Bull Subsidy Scheme is to be operated in conjunction with these herds so that farmers can buy improved bulls at subsidised prices. As these herds can only supply a small proportion of the improved bulls required by stock-owners, bulls are also to be bought for resale, at half the purchase price plus a R.. per bull charge to meet administrative expenses, from established breeders.

The Bull Subsidy Scheme is financed from the Cattle Export Levy Fund and administered by the Government on advice received from the Livestock Industry Advisory Committee. Between 700 and 800 bulls will be made available each year.

	1966 67	*1967 68*	*1968 69*	*1969 70*	*1970 71*
	R	*R*	*R*	*R*	*R*
Capital	10,000	10,000	10,000	10,000	10,000

VE04 Karakul Sheep Subsidy Scheme:

The Karakul pelt is much in demand and could become a valuable export for Botswana. Karukul sheep breeding is highly successful in neighbouring South West Africa and there is a good opportunity for expanding this industry into South-West Botswana. This part of the country is isolated from livestock markets; the local farmers depend for their livelihoods on finding a product which prospers under severe desert conditions and is also easily marketable. The Karakul sheep meets these requirements.

In 1965 over 4,000 pelts were sold at an average price of R5 each. The Veterinary Department has already achieved considerable success in up-grading the quality of the existing Karakul sheep by selective breeding. In order to promote this industry it is proposed to establish a stud flock of between 300 and 400 Karakul sheep. The stud flock will be operated as a demonstration farm providing an extension service to local breeders. High quality rams will be sold to stock-owners at subsidised prices. The costs of this scheme will be met from the Cattle Export Levy Fund.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	5,000	5,000	5,000	5,000	5,000

VE05 Dorper Ram Subsidy Scheme:

There are in Botswana some 250,000 sheep, the majority of which are round-ribbed Afrikander. However, in 1965 the value of live sheep and mutton exported totalled together only R45,000. A considerable increase could be achieved by up-grading the quality of the stock. By cross breeding with imported Dorper rams a rapid improvement in mutton quality is possible.

It is proposed to promote this development by purchase each year of 200 to 300 high quality Dorper rams in the Republic of South Africa to be distributed at subsidised prices to approved stock-owners. The cost of this scheme will be met from the Cattle Export Levy Fund.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	5,000	5,000	5,000	5,000	5,000

Agriculture Department

AD01 Agricultural Demonstrator Training College:

The existing staff of Agricultural Demonstrators (field extension workers) is unable to satisfy the rapidly growing demand for entry into the Pupil Farmer and Pupil Stockman Schemes. At present there are about 100 Demonstrators, but the need is for many times this number.

Existing training facilities are inadequate to produce the additional Demonstrators. A new Training College, to produce 50 Demonstrators a year, is therefore being built near Gaberones.

The two year course will be similar to the present one and will be essentially practical. Students will be taught to deal with the situations, crops, tools and implements which they will meet in the field, and will have a minimum of theory to back this up. There will also be a greater emphasis on animal husbandry, which it has not been possible to teach adequately due to the shortage of land at the existing school.

The level of entry will be, as far as possible, Junior Certificate (2 years of secondary school), but it is estimated that by 1971 or 1972 there will be sufficient General Certificate of Education candidates to mount a Diploma course for 15 or 20 students each year. Since all except one of the posts in the Agriculture Department at the Diploma level are now filled by expatriates, the need for training staff at this higher level is also urgent.

Funds to cover the capital expenditure on the Training College have been provided by the U.K. Freedom From Hunger Campaign.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	235,100	205,100	–	–	–
Recurrent	–	106,600	112,900	118,600	122,500

AD02 Expansion of Extension Services:

The agricultural extension service in Botswana is concentrated on the Pupil Farmer Scheme and the Pupil Stockman Scheme. In these schemes farmers, in return for practising rules of good crop and animal husbandry, receive loans for agricultural implements and animal husbandry equipment, free seed of selected varieties for three years, and help and guidance in their farming operations from Agricultural Demonstrators. These schemes have been highly successful and have met with an enthusiastic response. The number in the two schemes has increased to 2,800, with over 500 more farmers waiting to join.

However, in the early years, Pupil Farmers require a lot of personal attention, and a Demonstrator can only assist 20 to 30 farmers. Those now in the field are already stretched to the limit. There is, therefore, a need for many more Demonstrators, as has been pointed out by every survey mission that has studied the question. The Freedom From Hunger Campaign (U.K.), also appreciating the urgent need for more Demonstrators, has provided the funds to build a new Training College to turn out 50 per year.

An increase in Demonstrators can produce a direct increase in the productivity of the country within the space of one season. Pupil Farmers, in the last few drought years, have been producing an average of 6 bags of grain per acre as compared with ½ bag per acre for other farmers. Thus one Demonstrator, assisting 20 farmers with 20 acres apiece, increases production by 2,200 bags per annum worth R3 to R4 per bag, or over R6,000, whereas his salary starts at only R516 per annum. In fact, the increase is even more spectacular, for Pupil Farmers very soon increase their arable acreage from an average of 15 up to 35 acres. Similar increases in productivity are obtained by the Pupil Stockman Scheme.

The proposed expansion in extension services will utilize new graduates of the Training College as well as certain supervisory staff. All these, except for one, will be local officers. Three

Batswana, currently on a Diploma Course in Rhodesia, will fill the next highest posts, while the remaining supervisory posts will be filled by the promotion of existing Supervisors and Demonstrators.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	35,800	38,800	20,400	21,600
Recurrent	–	24,100	56,100	85,800	109,800

AD03 Agricultural Short Course Centre:

Experience elsewhere in Africa has shown that many subjects difficult or impossible to put across to farmers and their families by field extension methods can be taught successfully at intensive, residential, short courses at which more specialized advice is available and where the advantages of group instruction may be utilized. In addition, agricultural courses catering to the special needs of teachers, community development workers, co-operative organizers etc. need to be run, as well as courses for recent school drop-outs who are about to start farming on their own. It is considered particularly important to inculcate new attitudes and new techniques in young farmers before they can adopt the traditional ones.

The Agricultural Short Course Centre will both meet the above needs and be used to give further training to existing Agriculture Department field staff so as to enable them to keep up with new developments and, for a select group, to advance to more responsible positions.

The Centre will be built adjacent to the Agricultural Demonstrator Training College so as to economise on facilities. Funds to cover the capital costs have been provided by the U.K. Freedom From Hunger Campaign.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	37,800	–	–	–
Recurrent	–	–	14,000	14,700	15,100

AD04 Dam Construction Unit:

To open up new grazing areas and to reduce the pressure of cattle at the existing watering points, it is proposed to create a mechanised Dam Construction Unit. Furthermore, because water is available in the arable "lands" areas during only a few months of the year, families can neither be there in time to do winter plowing nor remain long enough to fully utilize crop residues for cattle feed. The provision of permanent water points in the "lands" would both enable more timely cultivation of the land and relieve the pressure on the overgrazed areas around boreholes by allowing families to keep stock at their "lands".

The Dam Construction Unit will construct dams in "lands" and cattle-post areas of a sufficient capacity to provide an adequate supply of water the whole year round. The Unit is expected to complete about 30 dams per annum with an anticipated average wall size of 10,000 to 15,000 cu. yds. This will allow dispersal on a controlled and planned basis of 12,600 head per annum. Dams will not be handed over to the local people until agreement has been reached and arrangements made for the proper stocking of the area and maintenance of the dams. The Unit will also repair and desilt old dams. It will work in one catchment area at a time, fitting its work into an overall land-use plan for the area.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	336,400	110,200	115,700	121,500	127,600

AD05 Agricultural Broadcasting:

The Agriculture Department's extension programme is based on intensive work with the small percentage of farmers who are most amenable to new ideas. It is believed, however, that it would be worthwhile to try to teach new techniques to the mass of farmers, provided they can be reached at a low cost. Agricultural Broadcasting is the most efficient way of reaching this audience.

Until recently, not enough farmers have had access to radios to make Agricultural Broadcasting economic. This is being remedied by a grant from U.K. Freedom From Hunger Campaign which is providing 1,000 short-wave receivers (of which 300 are going to School Broadcasting) plus a vehicle and ancillary equipment. These radios will be placed at "listening points" so as to give the largest possible number of farmers access to them.

One Motswana has recently completed a course in Agricultural Broadcasting, and it is planned to train a second one. Between them it should be possible to increase Agricultural Broadcasting from the present one half hour per week to three hours per week within a year.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	17,300	–	–	–	–
Recurrent	–	5,000	5,200	5,500	5,800

AD06 Agricultural Census:

In any country as overwhelmingly dependent on agriculture as Botswana, economic planning can only improve as more and better information about the agricultural sector becomes available. The Agricultural Census, is aimed at gathering information on the methods and quantity of agricultural production, the system of food distribution, and the labour and consumption patterns of farm families.

The plan for the Agricultural Census has been prepared along the lines recommended by Mr. Morojele, the F.A.O. Regional Statistician for Africa. It will form part of the 1970 World Agricultural Census, but because of Botswana's urgent need for agricultural statistics, will be carried out earlier. A pilot survey is being carried out in 1966/67 with funds from the ordinary budget, and it is hoped that the United Nations Development Programme will meet the costs in the two following years. The main census has been spread over two years, both because of the wide variations in annual production which result from fluctuations in rainfall and because of the need to build up a trained staff so as to make the census as accurate as possible.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	16,500	63,000	–	–

AD07 Demonstration Ranches:

Overgrazing is the major factor preventing cattle sent to the abattoir by Pupil Stockmen from reaching the higher grades. Overstocking in the Eastern areas is caused not only by the paucity of permanent water supplies but also by the inability to restrict cattle numbers around water points due to the absence of fences.

At present, private fencing of grazing areas is almost never allowed because the predominantly illiterate and conservative farmers fear that if grazing areas are fenced some individuals may get no land at all. One solution to this problem is to show the farmers how fencing can benefit everyone. This can best be done by fencing in a number of small Demonstration Ranches in each on the Tribal areas and also in the free-hold farming blocks. Extension staff stationed at the Demonstration Ranches will also be able to use them to demonstrate the advantages of other animal husbandry techniques.

Each Demonstration Ranch of approximately 3,500 acres would be ringfenced, divided into two camps and capable of carrying continuously just over 200 head of cattle. Farmers would be encouraged to finish off their cattle on the Demonstration Ranch before sending them to the abattoir. Under good management, it should be possible for a beast to improve by one grade and put on 100 lbs. liveweight during a three to four month stay on the Demonstration Ranch. The gross benefit to cattle owners from each Demonstration Ranch would therefore be about 5,000 per year, or an average of R7 per beast, as against only R1,800 recurrent costs. In winter the ranches will maintain the condition of ploughing oxen.

Recurrent costs will be recovered from the farmers by charging them about R1.00 per head per month. Within 2 years each Demonstration Ranch will be self-supporting, and any profits will be used to extend it or to construct additional ranches.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	14,600	18,300	18,300	3,600

AD08 Central Research Station:

Because Botswana has some unique agricultural problems, it is essential that crop research and experimentation be expanded so as to provide a sounder basis for the advice disseminated by the Agriculture Department's extension service. The present crop research work is carried out at experimental stations at Mahalapye, Gaberones, Good Hope (near the Barolong Farms) and Moshu (near Maun). These experimental stations, comprising only 82 acres, are fully exploited, and no further expansion is possible at them.

It is essential that long term soil fertility experiments be initiated as soon as possible, together with extensive trials with cotton sprays, food storage, and machinery and mechanised draught implements. These trials will require large experimental areas and, together with plant pathology work, will require special laboratory facilities, which are not presently available. A site of 200 acres is available near Gaberones for the Central Research Station.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	27,600	8,100	1,000	–
Recurrent	–	10,800	11,100	14,000	11,600

AD09 Crop Protection:

In order to combat severe losses to crops from pests and diseases, much essential investigation must be done. Since little such work has been done here in the past, all control measures have been based on research findings in neighbouring territories. Although the adaption of these findings has proved fairly successful in Botswana, quite often these methods have failed, with resultant crop losses. A case in point was a cotton pest which devastated germinating cotton seedlings; this pest had not been associated with cotton in any other country. An entomologist and plant pathologist will be recruited by the U.K. and U.N. respectively to undertake these investigations.

Quelea control is of equally vital importance to Botswana, as large swarms of these birds do tremendous damage to small grain crops. Swarms bred in Botswana can also cause great losses in neighbouring countries, and vice versa.

Recently a Grain Storage Officer who spent a year in Botswana stressed the need for further investigation into grain storage problems, covering both the chemical and physical control of damaging insects, and legislation to cope with the problem. These investigations will require the employment of a full time grain storage expert.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	20,100	4,000	–	–
Recurrent	–	27,600	28,400	28,800	34,100

AD10 Cotton Marketing:

Several years of experimentation showed that cotton is a cash crop that can both survive well in years of drought and give outstanding returns in years of good rainfall or under irrigation. It was therefore introduced to farmers under the Pupil Farmer Scheme in 1963/64, and, despite the drought, the acreage under cotton has expanded rapidly in each succeeding year. It is intended to further expand cotton production in this and future years, with a 1967 production target of 4,000 bales worth about R120,000.

In previous seasons, while the cotton crop was still small, it was possible for Agriculture Department staff to handle all cotton marketing. However, from 1967 it will be necessary for organized marketing to be instituted. It is proposed that Government erect buying centres in the main cotton-producing areas, viz Pitsane (Barolong), Kanye (Bangwaketse), Ramoutsa (Bamalete), Molepolole (Bakwena) and Pilane (Bakgatla), which would be leased to cotton ginning firms which would supply a buyer/grader on selected days. The buyer/grader would buy the cotton for cash and arrange for consignment to the ginnery. Two buying centres would be constructed in 1967/68, a further two in 1968/69, and the last one in 1969/70. Visits to the buying centre by Agriculture Department staff would ensure that farmers received a fair price for their crop.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	4,100	4,100	2,100	–

AD11 Pilot Irrigation Settlement:

Because of the unreliability of dryland farming under the variable rainfall conditions of Botswana considerable attention is being given to the possibility of irrigation. Work has already commenced to assess the physical potential for irrigation in Botswana but no work has been initiated to study the sociological and practical problems of farming under the strict regime and discipline essential to successful irrigation farming. Since experience elsewhere in Africa has shown that the sociological difficulties are the most serious limiting factor to the success of irrigation settlements, it is of the utmost importance to investigate these problems before any large scale settlement scheme is started.

It is proposed to irrigate a 115 acre plot near Mahalapye, of which 15 acres will be used for experimentation with various crops and the remainder divided into 20 holdings of 5 acres apiece. The plot will be on suitable soil adjacent to a sand river from which the necessary water will be pumped. The scheme will be controlled by an irrigation agronomist who has been requested from the U.K. and who will be assisted by two Agricultural Demonstrators and ancillary staff provided for in this project.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	24,500	7,100	–	–
Recurrent	–	5,000	5,300	5,700	5,800

AD12 Ecological Surveys of the Kalahari:

In order to enable the national herd to be expanded without further overstocking areas in Eastern Botswana, it will be necessary for new grazing areas to be opened up. Although most of the Kalahari is semi-desert, it is believed that there are large portions of it capable of carrying cattle. However, these areas are little known ecologically, and in order to assess their potential land use, surveys must be carried out. One such survey has been completed in the Northern Crown Lands in association with U.K. Directorate of Overseas Surveys, and smaller scale surveys are carried out from time to time by the Pasture Agronomist.

It is proposed that a survey of the Central and Southern Kalahari regions be carried out by the Directorate of Overseas Surveys, assisted by the Pasture Agronomist. The main limiting factor in such work is the availability of reliable transport suitable for the difficult conditions encountered. This project is to provide two 4 wheel drive vehicles, a 5 ton truck and a 1½ ton truck, together with running costs, camp equipment and radio telephones.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	11,200	3,500	3,800	4,100

AD13 Mechanised Fodder and Ploughing Unit:

This unit, consisting of tractors and ancillary equipment for both ploughing and gathering fodder, was established as an emergency drought relief measure in 1966 when the oxen were too weak to plough and fodder had to be gotten to reduce the rate of cattle deaths from starvation. In better years, it may no longer be necessary to cut fodder, but a large number of farmers will still have to use tractors for plowing, especially the more progressive farmers who are cultivating larger acreages.

In 1967/68 it will be necessary to bring the Unit up to proper working efficiency by providing a mobile workshop, a Land Rover, and housing for the officer in charge. The recurrent costs of running the Unit will be met by charging the farmers R3 or more per acre. Provision has been made in Project ND03 for ploughing loans to be administered by the National Development Bank.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	80,000	15.500	–	–	–

AD14 Bull Breeding Camps:

There is an acute shortage of good breeding bulls which can be purchased at reasonable prices in Botswana. In addition, there are no facilities for demonstrating to farmers the effects of good animal husbandry practices.

To supplement and provide bulls for the Veterinary Department's Bull Subsidy Scheme it is proposed to establish three Bull Breeding Camps, two in 1968/69 and one in 1969/70, under the direction of an Agricultural Officer, with two Agricultural Demonstrators resident at each Camp. Each Camp will be stocked with about 180 head divided into herds, three of which will be stocked with Afrikander cattle and one with indigenous cattle. The Afrikander herds will be used primarily for producing bulls and heifers for local sale, while the indigenous herds will be used to demonstrate to farmers that great improvements in cattle productivity can be achieved with Tswana cattle. To achieve this latter end, farmers will be given a variety of short courses and demonstrations at the Bull Breeding Camps.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	–	92,500	57,500	20,600

AD15 Mobile Animal Husbandry Teams:

In the central and western parts of the Bamangwato, Bangwaketse and Bakwena Reserves, where the population is widely dispersed, mobile teams are considered more economic than permanently stationed Demonstrators. Since these are particularly important cattle producing areas, it is proposed to establish two Mobile Animal Husbandry Teams, one in 1968/69, one in 1969/70, to teach the farmers improved techniques. The chief purposes of these teams will be to increase the "off-take" percentage of the herds, the weights and grades of cattle consigned to the abattoir, and the conditions of ploughing oxen.

Each team, composed of one Agricultural and Livestock Officer and twelve Agricultural Demonstrators, will move from area to area, spending about one week at each point. It is visualized that the team will visit each area about four times a year. Cattle owners will be notified in advance when the Mobile Animal Husbandry Team is due to their areas. In order to participate, farmers will have to join and fulfil the requirements of the Pupil Stockman Scheme.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	–	16,800	–	16,800
Recurrent	–	–	15,400	16,200	32,400

AD16 Pasture Investigations:

In its husbandry extension work, in particular through the Borehole Repayment Scheme and the new Dam Construction Unit, the Government has been and is continuing to attach great importance to grazing control. Information will soon be required on the effect of grazing control on veld composition and productivity, as such information is a pre-requisite for planning further grazing schemes.

An existing pasture agronomy section carries out veld management research at two pasture stations, one near Mahalapye and the other near Lephephe. The section consist of a Pasture Agronomist, an Agricultural Supervisor and three Agricultural Demonstrators. In addition to work at the two stations, the section carries out vegetation and grazing surveys from time to time.

However, the present pasture agronomy staff and resources are committed to the existing programme, and a new unit will be needed to undertake the proposed investigations. It is proposed to establish a team of two pasture assistants or recorders to carry out the pasture investigations. A 1½ ton truck will be required for their transport, but housing can be provided at the pasture research stations when they are not engaged in the field.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	–	5,200	2,600	2,800

Game Department

GA01 Game Protection:

Botswana's wildlife is of great importance as a source of food and an attraction for tourists and hunting expeditions. It is imperative that steps be taken to prevent this valuable heritage from being destroyed. The danger to game comes almost entirely from humans: hunting parties which exceed their permitted kill and poachers from both within and without Botswana. It is difficult to make a quantitative assessment of the present danger to game but it is clear that wildlife numbers have been dropping rapidly in many areas and, unless this trend is ckecked, it will not be long before many species of game are wiped out or limited to a few inaccessible or better supervised areas.

Responsibility for game protection rests primarily with the Game Department, but even with the moderate expansion of that Department that the Government can finance itself, it will be impossible to adequately patrol the country. Funds are needed for the expansion of the headquarters and the establishment of regional offices in the North and South, for the provision of vehicles and wireless sets to increase mobility, for the training of local officers to take over the senior posts now held by expatriates, and for the posting of staff to unpatrolled areas where game is threatened by extinction.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	39,000	65,100	46,500	32,200
Recurrent	–	6,400	27,300	46,500	76,300

GA02 Development of Chobe Game Reserve:

The Chobe Game Reserve is the largest single tourist attraction in Botswana and one of the finest Game Reserves in Africa. It has vast herds of elephant and buffalo and several species of antelope found nowhere else in the world, including the unique Chobe bushbuck. Being situated within ninety minutes drive from Victoria Falls and served by regular flights from Livingstone and Gaberones, the Chobe Game Reserve is in an excellent position to attract increasing numbers of tourists.

In order to retain and improve its condition, however, the Chobe Game Reserve must be carefully managed. A new road is needed to divert heavy through traffic from Rhodesia and Zambia to the Caprivi Strip away from the game viewing drive. Additional fire-fighting equipment will reduce the danger of a general conflagration destroying the animals' habitat, and it is considered desirable to extend the game viewing area by the construction of side roads and additional water points. Finally, further staff and vehicles are needed to permit proper supervision.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	25,300	12,000	12,800	–
Recurrent	–	3,100	6,900	11,500	15,700

Geological Survey Department

GS01 Mineral Exploration:

The main reason why so little exploitable mineral wealth has been discovered in Botswana, which is located in the centre of one of the richest mineral areas in the world, is that the personnel and equipment for basic mineral exploration have been lacking. The small staff of the Geological Survey Department has concentrated on locating and developing underground water resources and on completing the regional mapping programme. In the course of this work it has discovered many areas of mineralization, but has not had the staff or equipment to undertake more detailed studies. The discovery of vast mineral deposits is one of the chief hopes for developing the Botswana economy, and although this Government will do all it can to finance mineral exploration from its own resources, assistance is needed from abroad to enable this work to be properly undertaken.

An intensification of follow-up work in th area covered by the airborne magnetic survey southern Botswana is required, as this area considered to have a high mineral potential. Mar areas which have been or are to be covered b the regional mapping programme will be invest gated by a regional and detailed geochemica prospecting programme. In addition a systemati investigation of all known occurrences of econo mic minerals in Botswana will be undertaken Funds are needed for the vehicles and equipmen used in field investigations, as well as for addi tional professional and supporting staff and thei housing.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/7*
	R	*R*	*R*	*R*	*R*
Capital	–	102,600	–	–	–
Recurrent	–	40,000	42,000	44,000	46,000

Printing Department

PR01 Printing Building and Equipment:

The Government Printing works are presently housed in a building shared with the Broadcasting and Information Services. Its premises are unsuitable for the equipment operated by the Printing Department, and are already too small to handle its growing work load. The Printing Department has recently taken over the distribution of Government stationery, and is forced to use for this a temporary building inconveniently situated far from the printing works. It also expects to receive a new litho printing press soon, which will enable it to handle certain Government printing which is presently done in South Africa. The existing building was not designed for a litho press, and it would be necessary to reinforce the floor foundations if the machine is to be installed in the present printing building. It is therefore proposed to erect a new printing works in the industrial area of Gaberones at a cost of R68,500.

To enable the Printing Department to take over all Government printing, it will be necessary to purchase an additional varityper and more fonts in 1967/68, and further equipment in 1969/70.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	74,500	–	6,000	–

National Development Bank

ND01 Borehole Repayment Scheme:

One way in which livestock production may be increased is by controlled expansion of the grazing areas. This may be achieved by the drilling of new boreholes which are afterwards supervised by the Livestock Industry Development Teams of the Ministry of Agriculture. Stockowners are encouraged to form syndicates which may be provided with loans for "repayment boreholes" from the National Development Bank.

The average cost of a borehole, including equipping, is estimated to be R4,000. It is planned to make provision for the drilling of some 50 boreholes annually. The number of animals served by a borehole is to be limited to about 500, giving an average offtake of some fifty head, valued at approximately R2,000.

Maintenance of the boreholes may either be carried out privately or by the Government's Borehole Maintenance Unit for a standard charge. It is highly desirable that the true costs of providing water are brought home to stockowners in order to encourage ranching to be carried out on a commercial basis. The Borehole Repayment Scheme will contribute to the achievement of this objective.

	1966 67 R	*1967 68* R	*1968 69* R	*1969 70* R	*1970 71* R
Capital	166,000	200,000	200,000	200,000	200,000

ND02 Medium Term Agricultural Credit:

The improvement of arable farming is to be achieved through an expansion of the already highly successful Pupil Farmer Scheme. The Agriculture Department will train new Demonstrators at a new Agricultural Demonstrator Training College at Gaberones. But the full impact of extension advice through Agricultural Demonstrators cannot be achieved unless Pupil Farmers can obtain medium term agricultural credit for the purchase of farm implements.

Credit of this type can only be successful if it is carefully supervised. By channelling credi through the Pupil Farmer Scheme good supervisio can be maintained. The amount of capital require for this purpose is therefore based on the assump tion that in the next five years it will be confine solely to Pupil Farmers, and that each farmer o the average will have a "once and for all" requirement of R100.

In 1965 there were some 2,800 farmers in th Scheme, whilst only R48,000 of credit was ava lable amounting to an average of R17 per farme The first problem, therefore, is to provide exi ting Pupil Farmers with adequate capital. Th agricultural development programme envisages growing number of farmers joining the Schen each year for whom additional medium ter credit will be required. In 1966 67 R125,000 being made available from the sale of Crow Lands.

The period of repayment of each loan wil depend upon its purpose and size. It is estimate that the average repayment period will be fiv years and that interest will be charged at 6% p.a The loans will be administered by the Nationa Development Bank.

	1966 67 R	*1967 68* R	*1968 69* R	*1969 70* R	*1970 71* R
Capital	125,000	60,000	90,000	120,000	140,000

ND03 Seasonal Agricultural Credit:

Short term credit is needed to finance the production of crops. A farmer needs money for ploughing, fertilisers, seeds and other purchases.

Initially it is considered desirable to confine the provision of seasonal credit to members of the Pupil Farmer Scheme, though this would not preclude the furnishing of credit to those outside the Scheme who could produce adequate security.

In the early stages it is envisaged that co-operatives will be concerned principally with marketing, though it is intended that they will eventually assume responsibility for the administration of the major part of short term seasonal credit. Until this becomes possible, the Agricultur Department's extention services will be used to distribute credit supplied by the National Development Bank.

The amount of capital required to be distributed as seasonal credit is based on the assumption that each Pupil Farmer will, on the average, require approximately R100 per annum, and that the number of Pupil Farmers will expand in direct proportion to the out-put of Demonstrators from the Agricultural Demonstrator Training College, Gaberones. The capital requirements in the years after 1967 68 will be partly met from the repayments received on loans issued in the preceding year.

	1966 67	*1967 68*	*1968 69*	*1969 70*	*1970 71*
	R	*R*	*R*	*R*	*R*
Capital	–	400,000	490,000	610,000	750,000

ND04 Co-operative Credit:

In addition to the need to expand staff to promote, organise and supervise co-operative societies there is the need to provide funds to assist the capitalisation and development of the societies themselves. Two principal forms of credit are required – short term loans to finance marketing operations and long-term loans for capital purposes.

The short-term loans are required to finance mainly crop and livestock marketing and would normally be repayable over a period of 3 to 6 months. Longer-term loans (for periods up to 7 years) are required for the construction of trading premises, warehouses, ranching areas and holding grounds, and transport. These loans would supplement capital raised by the societies themselves and make possible a much faster rate of development. Co-operatives are required by law to allocate 25% of net trading surpluses to undistributable reserves in order to ensure a steady growth of self-owned capital and thus progressively decrease reliance on loans from other sources.

Within the time span of the Plan, however, it is anticipated that there will be a rapid growth of co-operative activity, particularly in the field of livestock marketing, and the need for short-term funds will therefore be extensive and urgent.

	1966 67	*1967 68*	*1968 69*	*1969 70*	*1970 71*
	R	*R*	*R*	*R*	*R*
Capital	–	90,000	108,000	142,000	170,000

ND05 Commercial and Industrial Credit:

The Government proposes to promote commercial and industrial investment by the provision of credit facilities for private enterprise both local and foreign through the medium of the National Development Bank. At present there are many entrepreneurs who wish to set up businesses within Botswana but are unable to raise sufficient finance to supplement their own available resources. The commercial banks are subject to credit restrictions enforced by the South African authorities and supply only a small part of the credit required in this field.

It is intended, furthermore, that the National Development Bank will fill a gap in the credit structure of the country by providing credit facilities to those people who, either because of the type of security they have to offer or because they require medium or long term loans, cannot have recourse to the commercial lending institutions.

The Government's objective is to attract trade, business and industry to Botswana. To achieve rapid expansion in these fields the creation of a Botswana Development Corporation is being considered. Such an institution would play an active role in interesting investors in new projects and, when necessary, entering into partnership with local and foreign private capital. Finance for these activities would be furnished by the National Development Bank.

In 1966/67 R100,000 has already been secured for the commercial development of Gaberones.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970 71*
	R	*R*	*R*	*R*	*R*
Capital	100,000	250,000	250,000	500,000	500,000

ND06 Hainaveld Scheme :

In recent years there have been periods of prolonged drought in Ngamiland; cattle have been concentrated around the few remaining places with a permanent water supply, resulting in gross overstocking. Expansion of the grazing into the swamps is prevented by the presence of tsetse fly. It is therefore proposed to open up new grazing areas to the east by pumping water from the Botletle River, and to move the cattle away from the overstocked areas.

The capital expenditure detailed below will provide over a period of three years for the installation of pumps and pipelines in order to create twenty-four watering points at intervals of two and half miles. There will be sufficient grazing around each watering point for about 500 head of stock, permitting some 12,000 head to be accommodated. A grazing fee (30 cents per head per annum) will be charged to cover recurrent costs; the estimated value of the annual offtake is R48,000. The scheme will be supervised by the extension staff of the Agriculture Department employing a loan to be secured through the medium of the National Development Bank.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	66,000	66,000	66,000	–

ND07 Low Cost Housing :

The creation of a new capital at Gaberones, and the development of important industrial and commercial centres such as Lobatsi, have created an acute demand for low cost housing. The influx of people to these centres in search of work has resulted in the growth of slums. In order to arrest this trend and clear the "shanty towns" which have already appeared, funds are required for the construction of municipal housing.

The cheapest and easiest means of providing finance for low cost housing is for the National Development Bank to grant block loans to Township Authorities, which undertake their administration, the supervision of the construction of houses and the collection of rents.

The capital provision which has been made for this project is less than the sum needed to house everyone requiring such assistance. The funds allocated are based on the ability of the Township Authorities to administer their respective schemes.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	375,000	–	375,000	–

ND08 Mortgage Finance Housing :

There is a great shortage of housing to accommodate both Government officials and private persons, which is seriously hindering the country's development. In the public sector it is intended to place Government housing on economic rentals and concurrently to encourage home ownership. In the private sector many small businessmen are unable themselves to raise the capital cost of a house, whilst at the same time almost no housing is available to be rented.

South African Building Societies, although in receipt of considerable sums of savings from Batswana, are not permitted to provide mortgage finance for house building in Botswana. There is consequently an urgent need to create mortgage finance facilities within the country.

The Government proposes that the sums shown below should be raised to enable the National Development Bank to issue housing loans to private persons. This type of loan is in general easy to administer provided the initial problems of controlling expenditure can be overcome. In this respect the Bank will rely where necessary on the Architectural and Building Branch of the Ministry of Works and Communications for supervisory services during the course of the construction of houses.

The amount of funds proposed for this project represents a conservative estimate of the likely demand for this type of loan.

	1966 67	*1967 68*	*1968 69*	*1969 70*	*1970 71*
	R	*R*	*R*	*R*	*R*
Capital	–	130,000	130,000	130,000	130,000

Cooperative Development Department

C001 Development of Co-operatives:

The chief factor limiting the growth of co-operatives has been insufficient supervisory and field staff in the Co-operative Development Department. Government will do what it can to improve this position, but the shortage of both capital and recurrent finance compels it to look to other countries for assistance.

It is intended to organize a further 20 Marketing and Livestock Improvement Co-operatives, 10 Consumer Co-operatives, and up to 150 Thrift and Loan Societies. Cooperative Officers are needed to organize and supervise these societies, and a Deputy Registrar and an Assistant Registrar will be required to train and direct the Co-operative Officers. Housing and vehicles will be needed for the new staff.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	-	40,900	15,000	10,500	8,000
Reccurent	-	13,600	22,400	25,100	26,100

Public Works

PW01 Lobatsi-Gaberones Road:

The traffic volume on the Lobatsi-Gaberones road has reached over 200 vehicles per day, and it is no longer feasible to maintain the sand and gravel surface at the minimum necessary standard. The road, which forms part of the main North-South Trunk Road, has become a serious hazard to the health and safety of travellers as a result of the dust and corrugations. With the completion of the capital at Gaberones, traffic is expected to grow rapidly on this important road.

The present 40 miles of sunken road cannot be simply upgraded. It needs to be entirely rebuilt and realigned. The volume of traffic warrants a bitumen surface, since a good gravel surface could not be adequately maintained except at great expense. It is therefore proposed, as a matter of high priority, to raise funds to reconstruct this road to bitumen standard. It is anticipated that six months will be required for preliminary surveys and investigations. The actual construction would take some thirty months.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	221,000	642,000	422,000	–

PW02 Gaberones Drainage:

The initial work undertaken in connection with the Gaberones sewerage scheme allowed for the minimum requirements to meet the needs of the area then proposed for settlement. Since the original planning of Gaberones, a number of unforseen extensions have been necessary to cater for the rapid growth of the township. As a result the existing main drainage and sewerage require to be extended.

In addition the storm water overflow from Gaberones Dam, has caused serious damage to the Gaberones sewerage disposal works and protective measures are urgently required to prevent further damage. The capital sums set out below are therefore required:

(a) to install sewerage in the proposed new extension areas, and
(b) to meet the cost of storm water drainage to protect the sewerage works.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	90,000	30,000	30,000	30,000

PW03 Gaberones Township Roads:

As a result of the enhanced costs of construction and a lack of funds, a number of streets and roads within Gaberones Township were not completed to full bitumen standard when the capital was being built. Some only require the bitumen carpet, others the final gravel surfacing and bitumen and some complete construction.

Bitumen surfaces are required to prevent the dust menace to health and, in areas where road traffic is heavy, to reduce the machine maintenance costs. Some of the roads carry over 800 vehicles a day; the gravel surfaces cannot be properly maintained with such a volume of traffic.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	91,500	73,500	–	–

PW04 Tlokweng Drainage:

As a result of the construction of the new road from Gaberones to the border, the normal storm water drainage around Tlokweng Village has proved inadequate. The presence of the new road tends to concentrate the flow at the eastern side of the village resulting in flooding and damage to property.

Special plans have been prepared from aerial photographs from which new flow channels have been accurately sited and designed. Funds are urgently required for their construction in order to protect Tlokweng Village from further damage.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	10,000	–	–	–

PW05 Gaberones-Border Road:

The road from Gaberones to Zeerust, which crosses the border at Kopfontein, has recently been reconstructed to gravel standards. This border road provides the shortest route to the Republic of South Africa and such major centres as Pretoria and Johannesburg.

It is considered necessary that the present high-class gravel surface be preserved with a stabilised base course and bitumen carpet. The preliminary investigations and design will take six months and the main construction a further twelve months.

Although at the moment the volume of traffic on this road is low, a rapid increase is expected with the development of Botswana's capital at Gaberones. This trend may be further accentuated by the relaxation of the restrictions at the border gate and the possible bitumenising of the road from Kopfontein to Zeerust by the South African authorities. It is planned that this project should commence towards the end of 1968/69 when the volume of traffic will have grown sufficiently to justify the investment.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	–	79,000	79,000	–

PW06 North-South Road:

Funds provided by the International Development Association have enabled a number of key betterment works and bridges to be completed on the North-South Trunk Road. Regrettably insufficient funds were available to carry out all the improvements warranted by the volume of traffic.

A dangerous section of the road north of Francistown needs to be relocated. A new bridge is required north of Mahalapye. Thirteen dangerous bends need to be eliminated and better drainage provided in a number of places where flooding occurs.

It is planned that the preliminary investigations should be carried out in 1967/68 departmentally, and that the main construction work should take place in the following two years.

	1967/68	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*
Capital	3,000	50,000	135,000	–

PW07 Bridges and Drainage on Main Roads:

This project is mainly concerned with the improvement of the following roads:

(a) Lobatsi to Kanye

(b) Kanye to Molepolole

(c) Sebinas to Totome

(d) Maun to Ghanzi

Many of the existing bridges on these main roads need to be raised to prevent prolonged flooding during the rainy season. In addition culverts and better drainage are also required to prevent flooding, so that the roads are made passable in all weather.

For example, the river at Mochupa which divides the village into two, often floods the road, preventing communication between the two halves. A new bridge is required over the Themalakane River near Toteng to permit traffic to pass between Maun and Ghanzi in all weather.

The preliminary studies will take some eighteen months and the main construction will cover the period 1968/71.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	10,000	50,000	150,000	150,000

PW08 Township and Village Roads:

In addition to the provision made in Project PW03, funds are required to bitumenise a number of roads and streets in the townships and main villages. This is desirable in the interests of health, as well as to reduce excessive maintenance costs on those sections which are more heavily used.

In all, some 330 miles have been selected in the main centres where the need for a bitumen cover is particularly pressing. In most cases roads require reconstruction, the provision of a base course under the bitumen seal. Proper surface water drainage is also necessary.

Work on this project is related to the preparation of proper town plans, and, since it is

intended that this design work will proceed in stages, planned expenditure and funds have been phased with this limitation in mind.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	9,000	50,000	50,000	50,000

PW09 Road Maintenance Training:

In a country where educational development has long been retarted, localisation can be effected and rapid development can take place only if a concentrated effort is made to up-grade the existing qualifications of staff through in-service training.

At present the Roads Branch is providing limited training financed from its recurrent budget. It is essential that separate provision be made for a scheme to train road maintenance foremen, plant operators, technical assistants and similar staff. There is a need, too, for trained cost clerks who play a vital part in pre-investment work and the controlled expenditure of funds.

Provision is made in the expenditure proposed below for the training of 50 Road Section Officers, 19 Plant Operators, 8 Technical Assistants and 15 Cost Clerks.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	17,100	14,800	3,600	3,200
Recurrent	–	1,100	16,700	32,100	41,000

PW10 Road Depots:

Road depots are required at regular intervals along all roads maintained by Central Government. Each depot provides housing for the Road Section Officer and his staff, offices and stores and a security yard.

It is proposed to continue to construct depots systematically to accommodate staff as they are trained. Eventually thirty such depots will be required, and a further eleven major central depots for Road Supervisors.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	–	53,000	48,000	50,000

PW11 Airfield Improvements:

In a country where the population centres ar separated by vast distances of arid and largel uninhabited land, an air service can provide cheap and flexible means of communicatio Botswana has its own airline which links th main centres with Livingstone, Bulawayo an Johannesburg.

Many of the airfields at present used b Botswana National Airways are of an unsatis factory standard. During the plan period it i intended to carry out a series of improvements t the runways to allow Douglas DC3 and simila aircraft to operate from them without danger i all weather. In addition navigational aids an other airfield facilities are to be provided. Al airfields are to be made game proof.

The proposed allocation of funds will allow an average of R52,500 to be spent on each of the following: Maun, Ghanzi, Lobatsi, Serowe Serondelas and Mahalapye – in that order o priority. In addition R68,300 is needed in 1967/6 for navigational aids and an average of R2,000 is required for preliminary investigations and planning for each airfield. Substantial recurrent maintenance costs will also have to be met.

The capital expenditure will be phased as follows:–

1968/69 Maun, Ghanzi

1969/70 Lobatsi, Serowe

1970/71 Serondelas, Mahalapye

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	74,300	107,000	107,000	107,000
Recurrent	–	24,000	39,000	41,000	47,000

PW12 Gaberones Airport Survey:

The present Gaberones airfield is situated too close to the centre of Gaberones to permit progressive expansion. The 4,500 foot runway has been recently improved to all weather standards suitable for the normal Douglas DC3 operations of Botswana National Airways, but is not capable of handling larger aircraft safely.

In time, as air traffic increases, a longer and stronger runway will be required to enable Viscounts, and eventually large jet aircraft, to operate into and out of Gaberones. The long term objective is to build an airport of international specifications. Since the present airfield is unsuitable for development on this scale, a survey must be carried out to locate an alternative site. The capital expenditure set out below will cover the cost of the necessary pre-investment investigations for the new airport.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	20,000	–	–	–

PW13 Mechanical Workshop:

The Central Mechanical Workshop in Gaberones is the main workshop within the country for the repair and maintenance of Government vehicles, road plant and equipment. The workshop carries out complete engine and heavy road plant overhauls, diesel pump repairs which are beyond the capacity of the four subsidiary workshops situated at Lobatsi, Mahalapye, Francistown and Maun.

The Central Workshop has developed piecemeal over a considerable number of years and, whilst adequate facilities exist for engine overhauls and diesel pump repairs, and in the machine shop, there is an urgent need to replace two dilapidated buildings to provide adequate workshops to cater for the increased volume of work in the welding and construction section.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	30,000	–	–	–

PW14 Electrification:

Most of the major population centres of Botswana are without any public electricity supply at all. It is proposed to install a small power house building with two 10–20 k.w. diesel generators and an electrical distribution system in several of the main centres (Serowe, Kanye, Molepolole, Maun etc.) to supply public buildings (school, hospitals, Government offices) and private subscribers, who will be charged an economic rate. R65,000 is needed for this rural electrification programme in both 1967/68 and 1968/69.

The actual cost of the electricity supply scheme to Gaberones and Lobatsi has considerably exceeded the original estimates for two reasons first, because equipment and installation costs have risen more rapidly than expected and, secondly, because the demand for electricity has been greater than predicted. It is therefore necessary to raise a further R500,000 in 1967/68 to cover capital costs of the Gaberones power station (R228,000), increased costs of the original Gaberones distribution system (R51,200), extension of the Gaberones electricity supply to new areas (R135,300), increased costs of the Gaberones-Lobatsi power line (R500) and increases and extensions to the Lobatsi distribution system (R85,000). This will bring the total capital cost of supplying electricity to Gaberones and Lobatsi to R1,378,000, the project remains viable.

In 1966/67 expenditure was primarily on the Gaberones-Lobatsi power line. R10,000 of loan funds already raised will be spent in 1967/68.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	108,700	575,000	65,000	–	–

PW15 Government Housing:

With the move of the Government from Mafeking to Gaberones and its rapid expansion in order to provide additional services and to promote more rapid economic development, the shortage of Government housing has become acute. Already dozens of Government officers must share houses or live in temporary dwellings, and the inability to get suitable housing has on occasions impeded the recruitment of technical and professional staff from abroad. If the ambitious programme envisaged in this Plan is to be realized, funds must be found for housing construction.

The expenditure in 1966/67 is mostly to provide housing for the Education and Medical Departments which have just moved from Mafeking and the Agriculture Department recently in Mahalapye. In 1967/68 it will be necessary to provide accommodation for the last department still located in Mafeking, the Surveyor-General's Department (R176,000), for the newly created Office of the President (R141,900), for those members of the Water Branch who presently lack proper housing (R114,300), and for various other persons who are already employed or will be so by next year. The housing required as part of other development projects has been included as capital in those projects.

Since Government housing is presently subsidised as part of the conditions of service, grants as well as loans are needed for it. Once Government housing is put on an economic basis, however, it will be possible to finance it entirely from loans. Furthermore as the Mortgage Finance Housing project comes into operation, the need for Government housing should rapidly diminish.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	647,900	679,500	37,300	94,300	44,000

PW16 Administrative Buildings:

In 1966/67 it has been necessary to provide office accommodation for those departments moving from Mafeking and Mahalapye to Gaberones. In 1967/68 offices are needed in Gaberones for the Surveyor General's Department (R65,000), and for part of the Education Department (R20,000) and the Ministry of Commerce, Industry and Water Affairs (R7,000); also improvements are required at the Kanye Prison (R2,500).

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	362,300	94,500	–	–	–

PW17 Meteorological Equipment:

With the withdrawal by the South African Government of the meteorological facilities provided by them in Botswana, it became necessary to establish a Botswana Meteorological Service. Limited amounts of equipment have been supplied by the World Meteorological Organisation (R3,000), and by the South African Weather Bureau (R5,000), but much more is needed to enable the Meteorological Service to fulfil its vital functions in the field of aviation, hydrology, underground water development, agriculture, veterinary and education.

1. Aviation: Theodolites and balloon-filling apparatus are required for the establishment of 7 pilot balloon stations to enable high altitude wind velocity to be measured.

2. Hydrology: In conjunction with the Hydrological Survey (ID02), 40 recording stations in three major catchment areas are required to measure rainfall, evaporation and wind velocity so as to enable rainfall-runoff relationships to be determined.

3. Underground Water Development: 34 rainfall stations and 12 borehole recorder stations will permit the correlation between surface water runoff and water table levels to be measured.

4. Agriculture: 5 agro-meteorological experimental research stations and 24 subsidiary rainfall, evaporation and wind recording stations are needed for research into the relationship between weather and crop production.

5. Veterinary: 2 fully equipped research stations and 5 minor networks of 6 gauges each are needed for "test" herds and for determining the effect of weather on foot and mouth disease.

6. Education: Meteorology will form part of the science and geography syllabus being introduced into the secondary schools and teacher training colleges. Equipment will be used for laboratory work.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	12,100	12,400	13,500	6,500

Posts and Telegraphs

PT01 Underground Cabling, Gaberones:

The Gaberones Township is being extended, and underground cabling is urgently required in order to provide telephone service in the new area. The revenue from telephone rentals and calls should be sufficient to cover the cost within about five years.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	20,000	–	–	–

PT02 Main Telephone Trunk Line:

There has recently been an enormous increase in the number of trunk calls handled daily between Gaberones and Mahalapye, Palapye and Francistown. This has resulted in long delays, often leading to considerable loss of revenue through the cancellation of calls. Since telecommunications between Gaberones and the north are centred on a single pair of wires, whenever faults develop along the line there is a complete breakdown until the fault can be located and repaired.

It is essential that a second pair of wires be added to the telephone route and that this second pair be exploited further by applying carrier equipment to increase the number of speech circuits. In 1967/68 R45,000 is needed for the section Gaberones--Mahalapye, R15,000 for Mahalapye–Palapye, R30,000 for Palapye–Francistown, and R25,000 for the carrier equipment. Increased revenue should be enough to repay a loan in about eight years. Funds have already been found for improvements of the line south of Gaberones during 1966/67.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	59,400	115,000	–	–	–

PT03 Teleprinter Service:

Although the only teleprinter service at present is for official use, several applications have already been received for commercial teleprinter services and this number is expected to rise rapidly with the establishment of diplomatic offices after independence.

Funds are required initially for eight machines and associated equipment, and revenue should be sufficient to cover the cost within five years.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	15,000	–	–	–

PT04 Extension to Gaberones Automatic Exchange:

The Gaberones automatic exchange is capable of switching only 400 exchange connections, and at the rate at which telephone services are been requested, maximum capacity should be reached before the end of 1967. The equipment can be extended to take 200 more lines, and revenue from this extension will more than justify the investment.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	40,000	–	–	–

PT05 Francistown - Maun Telephone Line:

Maun is at present without any trunk telecommunications other than the Police radio. As Ngamiland is becoming an increasingly important part of the country, with a major portion of the Hydrological Survey to be carried out there and

numerous safari companies making Maun their headquarters, it is important that this situation be rectified. With the completion of the Francistown – Maun road, a telephone line between these two places is considered a more viable investment than a radiotelephone link.

	1966/67	1967/68	1968/69	1969/70	1970/71
	R	R	R	R	R
Capital	–	50,000	50,000	–	–

PT06 Mochudi - Sequani Telephone Line:

Sequani, on the South African border about 25 miles south-east of Mochudi, is the central village of an area of over 5,000 people. A telephone line to Mochudi would connect this area to the country's telephone network and would be a viable investment.

	1966/67	1967/68	1968/69	1969/70	1970/71
	R	R	R	R	R
Capital	–	7,500	–	–	–

PT07 Pitsani - Sedibeng Telephone Line:

Sedibeng, just west of the Barolong Farms, is not connected to the telephone system. As Sedibeng is a well settled area and the site of an Agriculture Department research programme, it is desired to provide the residents with a means of rapid communication with the rest of Botswana. The telephone line will produce sufficient revenue to meet the capital cost within ten years.

	1966/67	1967/68	1968/69	1969/70	1970/71
	R	R	R	R	R
Capital	–	5,000	–	–	–

PT08 Tuli Block Farms Telephone Line:

Farm telephone line service has been provided as far north as Baines Drift in the Tuli Block, but there are a number of important farms, including an irrigation scheme, between there and the Macloutsie River. Telephone facilities are important to these farms because most of the crops are sold in South African markets on which up to date market information can be of great benefit.

By charging suitable rates it should be possible to recover the investment within ten years.

	1966/67	1967/68	1968/69	1969/70	1970/71
	R	R	R	R	R
Capital	–	25,000	–	–	–

PT09 Extension to Lobatsi Automatic Exchange:

The automatic equipment at Lobatsi Exchange is capable of switching only 350 exchange connections, and maximum capacity should be reached by the end of 1968. It is proposed to extend the equipment to take another 250 lines. The capital cost should be recoverable within five years.

	1966/67	1967/68	1968/69	1969/70	1970/71
	R	R	R	R	R
Capital	–	–	45,000	–	–

PT10 Francistown Post Office:

Francistown is the commercial centre of the north of Botswana. The existing post office is much too small for the expanding volume of work. A new post office should pay for itself over about five years.

	1966/67	1967/68	1968/69	1969/70	1970/71
	R	R	R	R	R
Capital	–	40,000	–	–	–

PT11 Maun Post Office:

The Maun Post Office is totally inadequate for its present work load, and will become more so as Ngamiland develops. Increased revenue should be sufficient to repay the capital investment within 10 years.

	1966/67	1967/68	1968/69	1969/70	1970/71
	R	R	R	R	R
Capital	–	20,000	–	–	–

PT12 Post Offices (General):

It is proposed to build new post offices in 1967/68 at Ramaquabane (the northernmost railway station in Botswana), Sequani (the centre of the south-east Kgatleng), Shakawe (site of the Witwatersrand Native Labour Association airport and recruiting centre and the largest village of the 11,000 people living on the western edge of the Okavango Swamps), Thamaga (the seventh largest settlement in Botswana, with 11,000 people), Kasane (administrative centre of the Chobe District and the take-off point for safaris), Sedibeng (in the centre of the best arable farming area in Botswana), and Tsabong (administrative centre of the Kgalagadi District).

Each post office will cost R2,000 and the revenue generated should be sufficient to repay a loan within five years.

In 1966/67 funds have been provided for the construction of post offices at Madinare and Sebinas, important villages in the Bamangwato Reserve.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	3,500	14,000	–	–	–

Surveyor General's Department

SG01 Survey Technician Training:

The rapid economic development of Botswana will create an expanding demand for trained technical staff in many fields of engineering, both Government and private. Provision must therefore be made for specialised technical "on-the-job" training.

A small training organisation is essential. It is a part of the routine and recurrent services provided by the Surveyor-General's Department to produce survey assistants. At present other Government departments repeatedly appeal to the Surveyor General to supply this type of technicians. He can meet at present neither these demands nor his own Department's needs.

This project is based upon an anticipated intake of six trainees each year for a two year training period with the object of turning out survey technicians able to assist on topographical and engineering surveys and geodetic levelling. The scope of this project is restricted over this plan period to so small an intake simply because it is estimated that not more than six suitably qualified applicants could be found in any of the next four years. One instructor will be able to handle the training envisaged. The expenditure projections cover the cost of buildings, equipment and all running costs.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	33,600	16,900	13,900	13,800

SG02 Survey Equipment:

The Surveyor-General's Department is responsible for supplying the topographical maps essential to almost all projects. The Department is short of both staff and equipment and almost no additional funds are available for expansion of recurrent expenditure. There is therefore a serious danger that development will be impeded by surveying delays.

Under this project it is proposed to purchase survey equipment such as tellurometers, geodetic levels and radio transmitter and receivers, which will enable the Department to maintain a greater output of work with the available staff and more efficient control of field parties. Photographic equipment is required to enable the Department to produce prints of aerial photographs as required.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	R	R	R	R
Capital	–	19,000	–	–	–

SG03 Town Mapping and Planning:

Township layouts and development proposals involving town planning are an important aspect of the work of the Surveyor-General's Department In this plan it is proposed that detailed plans should be prepared for the orderly development of all the main villages and towns of Botswana. The expenditure projections given below are to cover the cost of this work.

As technical adviser to the Town and Country Planning Board, the Surveyor-General provides a survey and drawing office service in connection with all land and town development projects considered by the Board.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	R	R	R	R
Capital	–	20,600	20,100	22,800	

Education Department

ED01 Francistown Secondary School:

The existing facilities for secondary education are concentrated in the south. The main population centre in the north around Francistown is poorly served. It is therefore proposed to establish a major four stream secondary school there. Francistown is in a focal position to serve this area, being a centre of communications, on the North-South trunk road, on the main railway line and connected by road to Maun in the west of Botswana.

The present secondary school is a small co-educational establishment with sub-standard facilities, having only three classrooms and four staff. Many of the pupils come from a distance and have to find their own lodging in the town as boarding accommodation is not available.

At present the school is run by the Mater Spei Mission with the assistance of a Government subsidy. If funds can be secured for the expansion, the school will be run by a Board of Governors as prescribed for in the Education Law (1966). On this Board will sit representatives of the Department of Education, the community served by the school, the Local Education Authority, the Mater Spei Mission and the parents.

The present facilities are sufficient to cater for one stream following a three year course. The proposal is to establish a further three streams leading to the Junior Certificate Examination and two streams following a further two year course leading to the Cambridge School Certificate Examination. This would expand the the school to a total roll of 480 pupils when fully operating, comprising 16 classes each of 30 pupils and requiring a staff of 23 teachers. To achieve this would mean building almost a complete new school, with residential accommodation for at least 400 of the pupils. Residential accommodation will also be necessary for the staff, and standard facilities for secondary education and recreation. Thus hostels, laboratories, a library, hall, administration block, and toilets must be built in addition to the classrooms.

If the project is phased as shown below, there are good prospects of the school producing an annual output for 1972 of 120 pupils of whom 50 will have the Junior Certificate and 50 the Cambridge School Certificate

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	230,400	130,000	157,300	–
Recurrent	–	20,900	44,500	65,200	85,800

ED02 Swaneng Secondary School:

Swaneng School is a private co-educational secondary school with 225 students in 10 classes (four Form I classes, two Form IIs, two Form IIIs, one Form IV and one Form V taking the Cambridge School Certificate Examination). Existing facilities comprise 8 classrooms, a laboratory, a library with a small adjoining office, simple housing for 10 unmarried teachers, dormitories for 48 students, an 11½ KW electricity generator and 2 boreholes for water.

The school is unique in this country. It has been built largely by the voluntary labour of the teachers and students. It has been financed wholly by voluntary contributions mainly from overseas; almost all its teachers are volunteers. It is the centre of a number of thriving community development projects.

The school is ably managed by a Principal who is responsible to a Board of Governors. It is situated 4 miles from the centre of Serowe, capital of the Bamangwato Tribe. It is therefore highly suited for expansion.

It is proposed to develop the school to a four stream school as far as Form III, with two of the streams continuing a further two years to the Cambridge School Certificate. This will lead to a student enrolment of 480 in 16 classes of 30 students each, under 23 teachers. To achieve this it will be necessary to supplement existing

buildings with housing for probably 18 salaried teachers, facilities for 240 students, a library, an office block, 8 classrooms, 2 laboratories and an assembly hall. It will also be necessary to increase essential services.

If the capital expenditure is phased as proposed below the school will have good prospects of an annual output of 120 students by 1972 of whom 50 will have the Junior Certificate and 50 the Cambridge School Certificate.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	261,400	112,400	–	–
Recurrent	–	33,000	66,000	85,500	90,000

ED03 Moeding Secondary School:

Moeding School is a co-educational secondary boarding school built by the London Missionary Society when it relinquished control of the well-known Tiger Kloof Institution in South Africa. It provides residential and academic facilities for 9 teachers and 180 students in two streams following the three year course to the Junior Certificate Examination. In anticipation of development, it has crowded in two small additional classes constituting a Cambridge School Certificate course. Well managed by the Mission, this school has showed how the prevailing problem of student wastage can be overcome by admitting its first 60 students to Form I in 1962, entering 54 of them for the Junior Certificate Examination three years later and obtaining the highest percentage in the country of students passing the examination after the prescribed three years of study. This fact, and the excellence of the school site 13 miles north of Lobatsi beside the main north-south road and railway, make the school highly suited for expansion.

It is proposed to develop the existing two three-year Junior Certificate streams to full five year Cambridge School Certificate streams and to add a third Junior Certificate stream. This will develop the school to an enrolment of 390 students in 13 classes under 19 teachers. To achieve this it will be necessary to supplement existing buildings with housing for 10 teachers, residential facilities for 210 students, a library and assembly hall, additional classrooms and laboratories for science teaching.

If the capital expenditure is phased as proposed below by 1972 the school will have good prospects of producing annually 50 students with Cambridge School Certificate.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	197,000	70,000	–	–
Recurrent	–	16,500	28,500	30,000	31,500

ED04 St. Joseph's Secondary School:

St. Joseph's College is a co-educational boarding secondary school. From small beginnings in 1948 when it produced the country's first Junior Certificate students, it has developed facilities for one five-year course leading to the Cambridge School Certificate Examination and one three-year course leading to the Junior Certificate Examination. Well-managed by the Roman Catholic Mission, it has had consistently good examination results, including 19 of the 37 Cambridge School Certificates obtained throughout the country in 1965. This fact, together with the excellence of the school site five miles south of Gaberones beside the main North-South road and railway, makes the school highly suited for expansion.

Existing buildings comprise 3 teacher's houses, housing for three Mission Fathers and three Sisters, residential facilities for 210 students, 8 classrooms, 2 laboratories, a library and an assembly hall.

It is proposed to add a third stream which will follow the full five year course to the Cambridge School Certificate Examination. This will develop the school to an enrolment of 390 students in 13 classes under 19 teachers. Existing buildings will have to be supplemented by 5 classrooms, a laboratory, a domestic science block, 2 toilet blocks for students, residential facilities for 180 students and housing for 7 teachers.

If the capital expenditure is phased as shown below, there will be good prospects of the school producing by 1972 an annual output of 90 students of whom 50 would have School Certificate and 25 Junior Certificate.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	136,000	30,000	–	–
Recurrent	–	15,000	27,000	28,500	30,000

ED05 Kgari Sechele Secondary School:

Kgari Sechele School was built by the Bakwena Tribe in 1955 at Molepolole, the large tribal capital. It has five inadequate classrooms used to accommodate one Form I class, two Form IIs and one Form III. The shortage of housing for staff causes high turnover of teachers, and the lack of boarding facilities means that the many students who are compelled to find lodging on their own cannot be properly supervised. The only recent improvement has been the result of the students' own initiative; they have themselves built a new laboratory.

It is proposed to develop this school into an equipped and well administered two stream secondary school, with courses leading to Junior Certificate. The school will be able to accommodate 180 students in six classes of 30. Housing will be provided for nine teachers and students not living at home will be accommodated in a hostel.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	127,700	38,800	–	–
Recurrent	–	7,100	11,100	15,200	16,000

ED06 Molefi Secondary School:

Molefi School was built by the Bakgatla Tribe in 1951 at Mochudi, the tribal capital. It has five inadequate classrooms used to accommodate one Form I, class, two Form IIs and One Form III. The shortage of housing for staff causes a high turnover of teachers and the absence of boarding facilities means that many students, who are compelled to find lodging on their own, cannot be properly supervised. Pregnancy among girls is frequent and the wastage of students over the three year course exceeds 60%.

It is proposed to develop this school into a properly equipped and well administered two stream secondary school with courses leading to Junior Certificate. A laboratory, library, hostel, dining room and housing for teachers are required. When completed the school will be able to accommodate 180 pupils, with good prospects of producing 40 Junior Certificate holders per annum.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	116,400	36,200	–	–
Recurrent	–	7,100	11,100	15,200	16,000

ED07 Seepapitso Secondary School:

Seepapitso School was built by the Bangwaketse Tribe in 1950 in Kanye, the large tribal capital. Since its early days the school has been paralysed by gross deficiencies of accommodation and equipment. There are at present one Form I class, two Form IIs and one Form III. Both staff housing and student accommodation are totally lacking.

It is proposed to develop this institution into a two stream secondary school with accommodation for 180 pupils in six classes of 30, and nine teachers. Four new classrooms, a library, assembly hall, hostel, dining room, laboratory and housing for teachers are required. When completed the school will be capable of producing some 40 Junior Certificate holders each year.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	129,700	37,800	–	–
Recurrent	–	7,100	11,100	15,200	16,000

ED08 Francistown Teacher Training College:

The need for a substantial increase in teacher training college places is urgent. The country's existing annual output of trained teachers is 85,

against an annual loss to the teaching cadre of 150. In-service training of unqualified teachers is another urgent need since they number 55% of the teaching force. In-service training of qualified teachers is also much required to raise the standards of the majority of qualified teachers, who have had only primary education before training.

An excellent opportunity presents itself for the opening of a new Teacher Training College in Francistown. A vacant hostel is available with accommodation well suited to teacher training. It has a good dining hall, modern kitchens to cater for 120 students and dormitories with toilet facilities sufficient for 48 students.

It is proposed, using this hostel as a nucleus, to build a Teacher Training College for 180 students, of whom two-thirds would be women, reflecting the expected ratio of women to men teachers in future years, and to use the full capacity of the college in the first few years of its existence to deal with the problem of unqualified teachers on lines proposed by Professor John Lewis of the University of London. Thereafter the College will assume a normal role, offering Primary Lower Certificate and subsequently Primary Higher Certificate courses, supplemented by in-service training courses.

If the project is completed as phased in the table below, there will be good prospects of the College solving the problem of the unqualified teachers within five years and thereafter producing approximately 50 trained teachers annually.

The Swedish International Development Authority has offered to meet the capital costs of this project; UNESCO has undertaken to supervise expenditure of funds.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	20,000	298,200	23,000	–	–
Recurrent	–	20,000	42,000	50,000	52,500

ED09 Lobatsi Teacher Training College:

Lobatsi Teacher Training College is an institution built by the Government and opened in 1956. It has facilities for 120 students of whom 90 follow the three-year Lower Primary Teacher Certificate course and 30 follow the two-ye Higher Primary Teacher's Certificate cours Annual output of trained teachers is 35.

There is a very urgent need to increase t output of teachers, since this college togeth with a second college at Serowe provide t only teacher training facilities in the countr The maximum annual output of teachers by t combined colleges, without allowing for wastag is 105. Actual annual output averages 85, agair an annual loss of 150, the difference being mad up by recruitment of untrained teachers.

Existing facilities comprise 5 classrooms, small library, a needlework room, residenti facilities for 120 students, 2 teachers' house and 4 small houses suitable for auxiliary staff.

The College is ably run by a Motswana Pri cipal who is responsible to the Director Education in the Ministry of Labour and Soci Services. This fact, together with the excellenc of the College site in Lobatsi close to the mai north-south road and railway, makes the Colleg admirably suited for expansion.

It is proposed to enlarge the College t accommodate 240 students in 10 classes unde 18 teachers. Of the total enrolment 180 wil follow the Lower Primary and 60 the Highe Primary Course. To achieve this it will b necessary to supplement existing facilities wit 5 classrooms, an administrative block, a larg demonstration room which will also serve fo assembly and dramatics, a library, students toilets, a laboratory, housing for 16 teachers residential facilities for 120 students and addi tional essential services.

If the project is completed as phased in the capital expenditure projections below, there will be good prospects of the College producing 70 to 80 trained teachers annually by 1970, doubling its present output.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	194,000	66,000	–	–
Recurrent	–	15,000	39,000	45,000	47,500

ED10 School Broadcasting:

The efficacy of educational broadcasting has been widely recognised in other African countries. It is particularly effective in the case of primary schools in a country with a widely scattered population. It could be especially valuable in Botswana as a teaching aid for the very many poorly trained teachers.

A 10 KW transmitter has recently been installed in Gaberones capable of reaching every one of the 250 primary schools in the country. The U.K. Freedom From Hunger Campaign have already provided a R5,750 grant for 300 radio receivers to be distributed among the primary schools. All that is now required are funds to meet the cost of a School Broadcasting Unit to prepare suitable radio programmes and to edit material obtained from other countries.

With a projected capital expenditure of R34,000 to meet the cost of a recording van and equipment and housing for the staff, and an annual recurrent expenditure of some R20,000 it would be possible to provide 10 to 15 hours of primary school broadcasting each week. Provision is made in the expenditure projections for the training of a local officer as a schools broadcaster.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	5,700	25,000	9,000	–	–
Recurrent	–	14,000	20,000	21,000	22,000

ED11 Primary School Teaching Aids:

There is a continuing need for teaching aids in the primary schools to assist the largely untrained and poorly educated teachers, and to supplement the meagre equipment of schools built with self-help labour. There is at present in primary schools a general lack of such essential equipment as blackboard instruments, chalk, desks, chairs and books.

Successive educational and economic survey missions have drawn attention to these shortage. For example in 1964 a UNESCO Educational Planning Mission stated; "there is an enormous dearth of teaching materials of all kinds -- especially of books – which might provide even the most rudimentary stimuli to intellectual curiosity and educational growth". The Economic Survey Mission (1965) of the U.K. Ministry of Overseas Development noted in their report that:

Another matter calling for urgent attention is the provision of more and better teaching equipment. With few exceptions, primary schools are starved of even the most rudimentary teaching materials and this lack is felt the more keenly because most of the homes from which pupils come can do nothing to supplement the teacher's work. Added to this is the fact that dependence on equipment and teaching aids is all the greater when teachers themselves are not well endowed with knowledge and skill.".

It is considered that every primary school classroom requires the following capital items;

1 Blackboard and easel
1 Set of blackboard instruments
1 Teacher's desk and chair
1 Cupboard
1 Globe
20 Pupils' desks (two seaters)
3 Wall charts.

This equipment costs approximately R252, and is needed for some 960 classrooms. In addition chalk, blackboard cleaners, exercise books, library books, maps and similar aids are required. Local authorities are responsible for primary schools and will be expected to provide for the maintenance and replacement of all equipment received under this project.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	150,000	100,000	100,000	–

ED12 Secondary School Bursaries:

In a country as poor as Botswana and, in particular, in the case of a Government dependent on an external grant to balance its recurrent budget, the greater the contribution made towards the cost of education by those parents able to afford fees, the better will be the educational facilities provided by Government. For this

reason school fees are charged. However, to avoid the children of poorer parents being excluded from secondary education through an inability to pay these fees, bursaries are offered.

In 1965 a large proportion of the 1325 students attending secondary schools within the country received bursaries. The total cost amounted to R30,000. In future years the cost of bursaries will rise parri passu with the expansion of secondary education.

The provision made for secondary school bursaries shown below is in addition to the provision made in the recurrent budget permitting the present level to be maintained.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	36,000	46,000	58,000	70,000

ED13 Higher Education Bursaries:

At the start of the plan period less than on third of the 640 administrative, professional an technical posts in the Civil Service were he by local officers. The Government considers of the highest importance that localisation shou be advanced as rapidly as possible. This mean not only accelerating in-service training, b also expanding the number of Batswana receivi university education as fast as suitable can didates are produced by the secondary schoo system. Funds are therefore urgently require for the maintenance of students on universit courses.

In 1965 there were 83 Batswana student receiving bursaries for higher education abroad 44 were studying for full professional qualifica tions at university, while a further 39 wer following courses leading to diploma qualifica tions. The cost of the bursaries granted to thes students amounted to R61,000. Provision ha been made in the projections of the recurren budget for the existing level of bursaries to b maintained. The capital requirements set ou below are additional bursaries to permit an ex pansion of higher education.

	1966 67	*1967 68*	*1968 69*	*1969 70*	*1970 71*
	R	*R*	*R*	*R*	*R*
Capital	–	56,000	48,000	64,000	80,000

Medical Department

MD01 Gaberones Hospital:

The capital works of Phase I of the Gaberones Hospital Project will have been completed before the end of 1966. This is the main hospital in Botswana. It has been designed to provide general medical facilities for people in the Gaberones area and, in addition, to provide various specialist facilities. The more complicated and difficult cases will be referred to Gaberones from other hospitals throughout the country. It is intended to centralise all student nurse and pupil midwife training in Gaberones under a Sister Tutor.

It is now proposed to implement Phase II of the Gaberones Hospital Project. This calls for an extension of the surgical ward, a maternity ward, a paediatric ward and a medical ward. Other additions required are a new nurses home, lecture/demonstration rooms for pupil midwives and student nurses, an X-ray block and a maintenance and orthopaedic workshop. Housing will be needed for the Matron, Sister Tutor, and other staff and a nurses home must also be built.

The completion of the Gaberones Hospital has the highest priority among the various projects proposed for improving medical facilities. Provision to meet the running and maintenance costs of the hospital has been included in the projections of recurrent expenditure to maintain existing services.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	15,000	157,000	39,000	12,000	6,000

MD02 Serowe Hospital:

Serowe Hospital is one of Botswana's main hospitals, serving the central and eastern part of the country. Since it was built the demands made upon it have grown considerably and now a number of improvements are urgently required.

In this project it is proposed to establish a female tuberculosis ward of 24 beds, and to extend the present isolation ward. Other additions proposed are an extension of the maternity ward, a kitchen (at present cooking is done in the open), a new laundry, an extension to the nurses home, and a lecture room where probationer nurses can receive instruction. The present nurses home is used to accommodate 20 nurses; there are only 14 beds in eight rooms.

The projections of recurrent expenditure makes provision for an additional medical officer, nursing sister, three staff nurses and 28 probationer nurses. Serowe will become an important training hospital for probationer nurses.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	67,900	–	–	–
Recurrent	–	27,000	28,500	30,000	31,500

MD03 Mahalapye Health Centre:

Tuberculosis is one of Botswana's major debilitating diseases. Thus, in addition to the special tuberculosis and isolation hospital to be established at Gaberones, provision is also required at Mahalapye Health Centre for a new tuberculosis ward of 24 beds.

Mahalapye is the centre of a heavily populated area and the present Health Centre is too small to accommodate the number of patients requiring urgent hospitalisation. At the moment patients are housed in a tent, a storeroom and on mattresses under beds in the wards.

There is no operating theatre with the result that all surgial cases must be transfered to Serowe Hospital eighty miles away. There have been several instances where the patient has died en route. A new operating theatre will be built at an estimated cost of R5,000

The laundry is at present washed outside; it is proposed to built a proper laundry. Other

additions required are a Matron's flat, an antenatal clinic and an office for the sanitary inspector.

In the projections of recurrent expenditure provision has been made for an additional medical officer, laundress, seamstress and night watchman.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	68,200	–	–	–
Recurrent	–	6,100	6,400	6,700	7,000

MD04 Lobatsi Hospital:

Lobatsi is one of the old "cottage" type hospitals. Accommodation has been expanded over the years, but there has not been an equivalent increase in domestic facilities, staff facilities, staff quarters, and technical ancillaries.

The most immediate requirements are for a nurses home lounge and ablutions. The present position is appalling; there is only one bath, one wash basin and one toilet to serve 25 student nurses; one room is now used as both lounge and dining room. The other improvements proposed for 1967/68 include a hospital kitchen, an isolation block (the present building has no lavatories or sluices), a laundry, extension of the Mental Home and alterations to the male ward.

In 1968/69 it is intended to build a female tuberculosis ward and a sterilising room and to make alterations to the private ward.

One of the present tuberculosis wards is an open type shelter with a thatched roof which becomes uninhabitable during tropical storms. The new ward would have special provision, not at present available, for the treatment of new born babies of mothers suffering from tuberculosis.

On the recurrent side provision is made for an extra medical officer, two staff nurses, a launderer and more casual labour.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	53,600	26,100	–	–
Recurrent	–	13,000	14,300	15,600	16,900

MD05 Gaberones Health Centre:

With the completion of the Gaberones Hospital the Health Centre, which has until now been used for all purposes, will serve as a tuberculosis and infectious disease hospital. To enable this conversion to take place a number of additions will be necessary.

In this project it is proposed to construct a new female tuberculosis ward with 24 beds. The present kitchen is grossly inadequate: a new kitchen should be built. The existing wards require fly-screening and an additional storeroom must be installed.

Additional recurrent expenditure will be required to meet the salaries of a medical officer, ten nurses and a laundress.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	12,500	24,000	–	–
Recurrent	–	11,000	11,500	12,000	12,500

MD06 Francistown Hospital:

Francistown is the main hospital in the north, receiving patients from as far away as the Chobe and Palapye. Many cases are referred from Maun Hospital as Francistown is better equipped and staffed. It is, however, greatly in need of a number of extensions to cater for demand.

In this project the main capital expenditure is for a female tuberculosis ward of 24 beds, for a male ward of 16 beds, and for a children's ward of 30 beds. Other additions are:

Lecture room for the training of midwives
Kitchen and ablutions for female ward
Conversion of Sisters' Mess into a kitchen
Extension of dispensary
Flats for nursing sisters
District nurses clinic
Office and storeroom
Operating theatre.

The projection of recurrent expenditure makes provision for an additional medical officer, a

staff nurse, 14 nurses, a laundress, night watchman, cook and casual labour.

	1966/67 R	1967/68 R	1968/69 R	1969/70 R	1970/71 R
Capital	–	–	74,900	54,800	–
Recurrent	–	–	18,000	19,000	20,000

MD07 Maun Hospital:

Maun Hospital serves the north-western part of Botswana. A number of urgent improvements are required in its facilities.

The present kitchen is constructed of mud bricks and is fast disintegrating. It is proposed that a completely new kitchen be built. A proper laundry must be built as laundry facilities are about non-existant. A new storeroom is also required.

The projection of recurrent expenditure makes provision for a laundress to be employed.

	1966/67 R	1967/68 R	1968/69 R	1969/70 R	1970/71 R
Capital	–	–	12,800	–	–
Recurrent	–	–	300	300	300

MD08 Kasane Health Centre:

Kasane Health Centre is situated in the far north, near the Zambian border. This is an area much visited by tourists who are attracted to the Chobe Game Reserve. To the southwest lies the vast Okavango Swamps where hunting safaris are frequently conducted. The swamps are infested with tsetse fly with the consequent danger to humans of sleeping sickness.

The present facilities at the Kasane Health Centre are inadequate; with the increase in tourism in this area greater demands will be made on the Centre. An extra ward is therefore required. The kitchen facilities are very primitive; it is proposed that a new kitchen be built. Provision is also made in this project for a small laundry and a laundress.

	1966/67 R	1967/68 R	1968/69 R	1969/70 R	1970/71 R
Capital	–	–	14,800	–	–
Recurrent	–	–	300	300	300

MD09 Ghanzi Health Centre:

The Ghanzi Health Centre offers the only medical facilities available in the Ghanzi freehold farming area in western Botswana. The Centre has a 24 bed tuberculosis ward, but lacks any facilities for X-raying patients' chests. A machine is available which could be transferred to Ghanzi if funds can be raised for the construction of a suitable X-ray room.

It is proposed in this project to construct an X-ray room and an engine house for the generator for the X-ray plant. In the projections of recurrent expenditure provision is made for a medical officer to be permanently stationed at this remote but important centre.

	1966/67 R	1967/68 R	1968/69 R	1969/70 R	1970/71 R
Capital	–	–	2,400	–	–
Recurrent	–	–	6,000	6,400	6,800

MD10 Good Hope Dispensary:

The Good Hope Dispensary is in the extreme south-west in the area of the Barolong Farms.

Until now the local Tribal Authority has permitted the dispensary to be conducted in a room attached to the tribal offices. The accommodation is most unsatisfactory; provision is made in this project for the construction of a new building to house the dispensary.

	1966/67 R	1967/68 R	1968/69 R	1969/70 R	1970/71 R
Capital	–	5,400	–	–	–

MD11 Shoshong Dispensary:

Shoshong is a village with some 7,000 inhabitants in the Bamangwato Tribal Reserve about 20 miles from Mahalapye. At the moment there is a small dispensary at Shoshong. However, the staff nurse in charge of this dispensary has no house provided for her.

The expenditure projections for this project make provision for the construction of a small house for the staff nurse, and also for furniture, instruments, sterilisers and other equipment for the dispensary.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	–	4,000	–	–

MD12 Public Health Education:

The general ignorance of the majority of the people about sound health practices causes much unnecessary hardship and avoidable illnesses, and seriously inhibits their capacity for work. In particular, there is a great need for education in sanitation, child care, nutrition, pregnancy and similar matters.

The Government intends to start a pilot project in health extension work to arouse interest and to gain the cooperation of the mass of the people in improving the general health of th community. The project will give field experienc and training to junior medical workers.

The area provisionally chosen for the pilo project is the Barolong Farms in the extrem south-west. Medical workers will be trained i public health education in this area and after wards will carry out public health extension wor wherever they are stationed. The pilot projec will be spread initially over four year. Durin the first two years a Graphics Officer will b employed to design and reproduce posters, charts planned graphs and similar teaching aids.

In the projections of expenditure provision i made for vehicles, workshop facilities and variou equipment for drawing and reproduction work. I addition to the Graphics Officer, a Health Educa tion Extension Officer and four local counter parts will be employed. The latter will understud the two experts.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/7*
	R	*R*	*R*	*R*	*R*
Capital	–	40,600	22,000	24,800	25,000

Ministry of Labour and Social Services

LS01 Language Laboratory:

English is one of the two official languages of Botswana. It is the language used for legal and administrative purposes and in secondary and further education; it is the principal medium of commercial communication and the medium in industrial work from at least the supervisory level upwards.

The standards of English are generally low, especially among school-leavers. It is poor enough in written examinations, but even weaker as a means of practical communication. Even those with Junior Certificate or General Certificate of Education (3 and 5 years of secondary education respectively) are usually unable to express themselves in clear speech or writing. This demonstrates the weakness of traditional class work in English grammar and syntax. The success of almost every form of training depends on improving the use of the English language. The Language Laboratory is an essential tool for efficient English teaching.

Language Laboratories are rapidly becoming standard equipment in schools throughout the world. They form an essential feature of training institutions in several parts of Africa. At the Botswana Training Centre, a Language Laboratory would raise the efficiency of English teaching out of all proportion to its cost.

It is proposed to establish at the B.T.C. a Language Laboratory for 20 students at a time, housed in one room with a teachers' control panel. Such a unit would be in almost continuous use.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	9,800	–	–	–

LS02 Development of Botswana Training Centre:

The Botswana Training Centre was established by the Government in 1964. It has classrooms, a laboratory, a small library, workshops for building, mechanical and electrical trades, hostel accommodation for up to 150 men and women, and a teaching establishment of 18. It provides a variety of public and private sector training.

In the plan period, two substantial increases in training are foreseen. Public Service training is likely to assume an increasingly formal pattern of regular and continuous courses, complementing the gradual establishment of standards appropriate to the newly shaped Public Service, probably to to be based on an examination system. Secondly, full time courses of approximately one year's duration will be initiated to fit poorly educated school leavers for clerical or semiskilled employment or for trade and technical training.

It is proposed to build another block of three classrooms, as well as a small hostel for the proper accommodation of relatively senior public servants. A further three teachers will be required, and housing for them will have to be provided.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	34,000	–	–	–
Recurrent	–	13,500	14,000	14,500	15,000

LS03 National Library:

The few libraries operating in Botswana are run by social clubs and similar bodies and cater only for parochial needs. When the Director of the Books Department of the British Council visited Botswana several years ago, he recommended the establishment of a National Library Service with headquarters in Gaberones and service points in the major district centres. These recommendations were accepted, and a National Library was built as part of the Gaberones Town Hall with funds from the British Council and Anglo-American Corporation. The British Council has furthermore undertaken to provide R10,000 worth of free books in each of the years 1966/67 to 1968/69.

Funds are now required for the further development of the National Library. This primarily entails accommodation for new staff and the purchase of additional books. The recurrent expenses are being carried on the ordinary budget.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	19,500	4,000	11,400	4,000

Ministry of Local Government

LG01 District Council Training:

The paramount need of all District Councils is training for their staff at all levels. This need is immediate and urgent and will continue throughout the five-year period, after which it the initial plan is successfully carried out, the crash programme should be capable of replacement by normal routine training.

It is proposed to recruit four training officers, one to be in charge of the programme, one for accounts, one in organization and methods and one for typing and clerical skills. Training will take place in Gaberones as well as at the District Councils' headquarters. The District Councils will be expected to provide accommodation for the training officers, but, being already heavily subsidised by Central Government, will not be capable of meeting other expenses.

	1966 67 R	*1967 68* R	*1968 69* R	*1969 70* R	*1970 71* R
Capital	-	35 100	33 400	34 500	36 000

LG02 Improvement of Local Courts:

There is at present a heirarchy of African Courts which hear both civil (customary) and criminal cases. At the lowest level these courts have no warrant; however by customary law those courts which have a warrent are not permitted to hear cases that have not first been taken through the lowest courts. The courts are racial in that they may not hear or adjudicate any case in which all persons concerned are not African. Those courts which have a warrent are expected to keep detailed records, however no real training has ever been given in the keeping of records and those records kept are often so sketchy as to give no real indication of the nature of the offence or dispute. All criminal cases which involve a sentence of over three months imprisonment are meant to be reviewed, however this does not always happen. The person adjudicating has received no training in sentencing and rarely does the punishment fit the crime. There is no recording of customary law which can be said to have any legal standing. Often after fines have been imposed years pass before they are collected and in some cases they are never collected. In some areas there is a back-log of cases some of which go back fourteen years.

This project aims at the rationalization, unification and improvement of effieiency of the existing African Courts by means of a detailed examination of the existing system, the bringing in of new legislation to make them non-racial, the introduction into the senior courts of the Penal Code or part thereof, the training of court officers and court clerks, the recording and printing of customary law, the introduction of up-to-date court record forms and receipt books and the regular inspection of court records and court accounts. The capital expenditure consist of furniture for the courts, vehicles and travelling expenses for the law recorder and his staff, and the salaries of the law recorder's assistants. The recurrent expenditure is the salary increases for court officers and clerks resulting from their training.

	1966 67 R	*1967 68* R	*1968 69* R	*1969 70* R	*1970 71* R
Capital	-	19 000	9 400	7 300	8 200
Recurrent	-	10 000	18 500	19 500	20 500

Community Development Department

CM01 Community Development Field Staff:

The economic and social development of Botswana greatly depends on the extent to which the majority of the population are prepared to change their traditional practices for a more modern and scientific mode of life. The major problem is how best to contact the individual stock-owner, farmer or ordinary citizen and communicate new ideas to him. To facilitate the work of the extension officers of technical departments, community development workers are required in each village who are trained in the techniques of communication with members of traditional communities.

Although the Community Development Department has been in existence less than two years, it has demonstrated in its rural pilot projects that village level workers can have a significant impact in a short period of time. The Government now proposes in this project progressively to expand the field organisation to embrace the whole country. The scheme is planned over four years, at the end of this period over 80 community development assistants will be posted in the field. These officers will be employed by local authorities who will gradually assume financial responsibility for them.

The Community Development Department's field organisation has played and continues to play a big role in the "Food for Work" (Ipelegeng) self-help programme. One of the key ways in which Batswana can improve their standard of living is through the mobilisation of self-help labour at the village level. This cannot occur without the stimulus and iniative of the community development workers.

The projections of expenditure given below cover subventions to local authorities for the housing and employment of development staff and for their transport and equipment.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	48,200	54,900	63,800	65,800
Recurrent	–	27,200	54,400	86,400	128,700

CM02 Community Development Training:

In order that the expansion of the Community Development Department's field organisation (CM01) should be fully effective, it is essential that provision is made for the training of community development assistants.

Under this project it is proposed to establish facilities for training in community development activities in conjunction with the Botswana Training Centre and various Government departments. It is envisaged that prospective community development assistants will receive courses over a period of a year in the theory and practice of community development, in elementary economic theory, in the social and economic geography of Botswana, in cooperative theory and practice and in the principles of agricultural extension work, public health education, rural building and government administration.

In addition to this basic training programme, courses will be given to inform the staff of other Government departments and local authorities in the aims and work of community development. Courses will also be designed to assist staff members of private clubs and associations in their work. Lectures will be given at schools to orientate schools more towards the communities in which they are situated.

The projections of expenditure make provision for the employment and housing of two expatriate lecturers and their local understudies, accommodations and maintenance of some twenty trainees and for lecture rooms, offices stores and equipment.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	77,700	27,900	45,400	21,100

CM03 Youth Service:

The Government is very conscious of the needs and problems of youth in Botswana. For many years to come the formal educational system will not be able to cope with all the needs of youth; provision must therefore be made for out of school training on practical projects.

It is intended that the development plan for youth to be put into operation should consider on the one hand the needs of the individual – and in particular his ability to earn a satisfactory economic livelihood – and on the other the contribution which can be made to community and national development by harnessing th energies of the country's youth.

The Government is aware that the development of Youth Service can be very costly. It is necessary to plan in this field with care and caution. An expert Youth Officer has been requested, therefore, from the United Kingdom to assist in the creation of a Youth Service. The detailed costs of this scheme must await the recommendations of this adviser; however tentative estimates are projected below.

They are based partly on the experience of such countries as Kenya and partly on local experience with, for example, the Builders Brigade at Serowe. The proposal under consideration is to run a series of localised full time projects in the initial stages.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	42,100	39,600	33,100	3,600
Recurrent	–	16,600	20,800	24,800	26,100

CM04 Home Economics Mobile Unit:

In the past few years there has been a rapid multiplication of women's groups. The recently formed Botswana Council of Women has 28 affiliated clubs some of them with several hundred members. These groups offer an excellent means of communication with housewives and mothers who can make a vital contribution in raising the standards of living of the people.

The Community Development Department at present gives assistance to such groups as far as possible, but lacks trained staff and transport. It is therefore proposed to establish a Mobile Unit consisting of a Home Economics Tutor and two local trainees. They would have a vehicle equipped to give courses and demonstrations on sewing, knitting, home sanitation, child care and nutrition.

In addition to the obvious educational value of such a unit there are several additional advantages. Firstly, the existing women's groups would acquire an enhanced value. Secondly, local counterparts would be trained locally "on-the-job", in the context in which they will have to work when trained. Thirdly, the scheme is self-contained and can be put into operation without requiring additional assistance.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	–	14,400	8,500	–	–

CM05 "Ipelegeng" (Self-help) Scheme:

From August 1965, until 30th June, 1966, the World Food Programme supplied foodstuffs under an emergency feeding programme for those who had been hardest hit by the drought and the consequent crop failures and loss of livestock. On 1st July, 1966, Botswana introduced the "Ipelegeng" programme whereby people receive W.F.P. food for themselves and their relatives in return for working on a variety of socially and economically useful projects. This programme is considered extremely valuable not only because it will result in the completion of worthwhile projects (de-stumping land, construction of teachers' quarters, classrooms, and small dams, repair of roads, anti-soil erosion measures), but also because it is transforming the attitudes of tens of thousands of people from one of wanting to get things from the Government to one of doing things on a self-help basis.

In order to succeed, such an ambitious project requires a considerable amount of organisation and material. The existing staff of the Community Development Department and other departments can provide a great amount of assistance, but local supervisors and British volunteers are needed to direct the individual projects and arrange for tools, equipment and materials. Supervisory staff must have vehicles and prefabricated quarters, and the "Ipelegeng" workers must have tools and equipment.

Funds have been found for 1966/67, but finance is needed to continue the programme in 1967/68.

	1966/67	*1967/68*	*1968/69*	*1969/70*	*1970/71*
	R	*R*	*R*	*R*	*R*
Capital	138,600	106,000	–	–	–

Ministry of Home Affairs

HA01 Bushman Training and Settlement:

There are some 4,000 Bushmen on the Ghanzi farms, of whom about one quarter are employed or the dependents of employees. The remaining 3,000 live off the proceeds of occasional employment, plant-gathering, illegal hunting on the farms, begging and stocktheft. The employment picture has been steadily depressed due to the fencing of farms (reducing needs for herdsmen), the competition of Batswana, and the arrival of nomadic Bushmen driven into the farming area by the drought. Relations between Bushmen and the freehold farmers have deteriorated rapidly, and squatters are no longer tolerated. The Bushmen who have long lived on the farms have lost the ability to survive in the desert and have no way of finding a living when they are evicted.

It is proposed to tackle this problem in two stages. First, to set up two training centres, one in the Kuki Quarantine Camp on the Ghanzi-Maun boundary where water and housing is available, and a second one at Anderson's Vlei, 100 miles further north. Some 100 Bushmen families at a time would receive elementary training in agriculture, animal husbandry and hygiene, as well as basic arithmetic.

After the families completed two years of training, they would be settled at Anderson's Vlei, where they would receive some cattle, and implements and be under partial supervision. Over an eight year period it should be possible to train and resettle some 2,000 Bushmen.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital		21,800	11,600	59,000	37,300

HA02 National Museum:

At present there is no museum in Gaberones and only one private one-room museum in the whole country. Botswana is in a state of transition and development, much of value to the countr has already been lost for lack of interest ar storage space. Expeditions to Botswana durin the last fourty years have removed from th country material of inestimable value whic would enhance the cultural heritage of Botswan

It is proposed to build a National Museum including an art-gallery, in 1967/68. The buildin would consist of a foyer, office, laboratory/store room and two display rooms, and would be capabl of expansion as the need arose. The Museu would open with four departments Natura History, Archaeology and Prehistory, Ethno graphy, and Art. A considerable amount o material has already been located and there wi be no difficulty in obtaining suitable material t furnish the entire building.

The staff would consist of two technician and a care-taker. UNESCO has offered an eigh month fellowship in Museography at Jos, Nigeri for which a suitable candidate has been found.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/7* R
Capital		26,000	2,000	–	–
Recurrent		5,100	5,600	5,900	6,100

HA03 Prison Workshops:

From the standpoint of both economics and prisoner rehabilitation, it is important to have prisoners engaged in productive activities. For the long-term prisoners who cannot be employed outside the prisons, there is only one small workshop available at Gaberones and none elsewhere. The Gaberones workshop can only employ half of the 120 prisoners in this category.

It is proposed to expand the Gaberones workshop, in which tailoring and carpentering are done, to enable all 120 prisoners to participate and to construct a similar workshop at Francistown. These workshops would also be used in

the evenings for classes and recreation and on Sundays for worship. At present there are no prison facilities for evening activity.

The construction costs are extremely low because prison labour would be used.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	-	7.000	600		

HA04 Prison Welfare Officers:

At present there are neither official nor voluntary agencies to assist prisoners after their release. The situation is not too bad for the prisoners from rural areas who can return to their land and cattle, but there is a great deal of recidivism among prisoners from the towns. After release, these people generally find it difficult to find jobs, and they are often forced by circumstance to return to crime.

It is in the hope of preventing these persons from returning to prison that Welfare Officers are needed. They would begin by interviewing prisoners upon admission, and would then assist them in keeping in touch with relatives and by providing them with suitable work and education in the prison. Before the prisoner's release, a Welfare Officer would contact possible employers and attempt to obtain suitable employment. They would finally pass on individual reports to community development or welfare officers to whom the ex-prisoner could report for assistance.

Two Welfare Officers, one for the North and one for the South, would be the minimum requirement. Capital is needed for their housing and recurrent funds for their salaries.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	-	-	15.000	-	-
Recurrent	-	-	4.800	5.000	5.100

HA05 Law and Order:

The Botswana Government has recently received a report from the police advisers to the Secretary of State in the Commonwealth Relations Office of the United Kingdom on the reorganisation of the police consequent upon the attainment of independence. The planning of this project has been based on the recommendations made by these advisers.

Whilst the existing police force was considered adequate for the maintenance of law and order in Bechuanaland, in view of its position as a dependent territory able to rely on the resources of the protecting power, some strengthening of the police is now considered necessary. The fact that development projects are now to be implemented in various new areas means that additional policing is required. The moving of the capital from Mafeking to Gaberones and the establishment of embassies at independence has also resulted in extra duties for the police.

In order to achieve the maximum economy in the use of funds, the expansion of the police will be mainly limited to an increase in the establishment of the Mobile Police Unit. This will permit additional country-wide coverage at the least expense.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	-	382.300			
Recurrent	-	71.200	118.500	121.100	130.000

Information Department

IN01 Film Unit:

Films can both advertise a country abroad and educate the local population about their own country. It is therefore proposed to establish a Film Unit which would make at least one film per year about various aspects of Botswana. These films would be shown overseas in order to help attract investors, foreign aid and technical assistance, and within Botswana so as to acquaint the people with their country's problems and objectives and to publicise Government's development policies.

The Film Unit would be staffed by a director and a cameraman, who would require housing and transport as well as filming equipment. Revenue from the commercial showing of the films should help offset the processing costs.

In addition to making films, the Unit would maintain a film library for showing within Botswana.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	41,500	–	–	–
Recurrent	–	13,300	14,000	14,700	15,400

IN02 Broadcasting House:

Radio Botswana can only function on a very restricted basis as long as it is limited to its present facilities. It currently shares a building with the rest of the Information Department and with the Printing Department, and has only one studio and insufficient office and engineering space. With one studio it is impossible to increase broadcasting time much above the present 2½ hours per day, and it will therefore be difficult to implement either the Agricultural Broadcasting (AD05) or the School Broadcasting (ED10) projects unless facilities can be expanded. Unfortunately it is not possible to expand the present building and it would cost almost as much to convert other parts of the present building into studios as to construct an entirely new Broadcasting House.

It is therefore proposed to construct Broadcasting House in Gaberones during 1967/68. Broadcasting House will cost R113,200 and will have three studios, one of which could be used for audience participation programmes. It is also necessary to find housing for additional staff presently being recruited (R65,000), to construct a power line to the new transmitting station (R4,500) and to purchase additional vehicles (R4,300). The recurrent costs of increased staff and maintenance are included in the ordinary budget.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	187,000	–	–	–

IN03 Lobatsi Transmitter:

Radio Botswana transmits at present from Gaberones in the short-wave, medium-wave and VHF bands. The medium-wave and VHF band transmitters are of low power and cannot be heard clearly in Lobatsi. The short-wave transmitter is of high power but because of "skip-effect" its signals are also weak in Lobatsi.

As Lobatsi is one of the most important towns in Botswana, it is proposed to remedy this by installing a small 50 watt VHF FM transmitter on a hill near Lobatsi. This transmitter would pick up the Gaberones VHF transmission and rebroadcast it, thus ensuring good reception in the Lobatsi area.

	1966/67 R	*1967/68* R	*1968/69* R	*1969/70* R	*1970/71* R
Capital	–	–	8,000	–	–
Recurrent	–	–	1,000	1,000	1,000

TABLE XI

CAPITAL EXPENDITURE ON TERMINATING DEVELOPMENT PROJECTS (R)

SCHEME	*1966/67*
1. *Interdepartmental*	
U.N. Counterpart Contribution	11,300
	11,300
2. *Water Branch*	
Hydrological Surveys	61,400
Borehole Equipment	107,700
	169,100
3. *Veterinary*	
Veterinary Fences	72,000
	72,000
4. *Agriculture Department*	
Agricultural Extension	7,900
Seed Multiplication and Distribution	21,400
Sorghum Seed Supply	38,000
Reconnaissance Land Use Surveys	30,600
Sandveld Pasture Research	2,400
Soil and Water Conservation, etc.	12,300
Agricultural Training, Mahalapye	10,600
Agricultural Husbandry Extension	6,700
Livestock Industry Development Teams	3,500
	133,400
5. *Game*	
Chobe Game Reserve	4,800
Mammal Survey	6,800
	11,600
6. *Geological Survey*	
Geological Survey Equipment	18,200
	18,200
8. *National Development Bank*	
President Hotel, Gaberones	408,000
Purchase of Breeding Stock	150,000
	558,000

SCHEME	*1966/67*
9. *Co-operative Development*	
Cooperative Development	33,100
	33,100
10. *Public Works*	
Gaberones Airfield	108,200
I.D.A. Road Project	1,507,600
Civil Aviation	96,200
Commission of Architectural Firms	27,500
Notwani River Bridge	10,800
Gaberones Roads, Drainage, Sewerage	41,100
Industrial Area Railway Siding, Gaberones	10,800
Parks and Landscaping, Gaberones	4,400
Paving Gaberones Mall	11,100
	1,817,700
13. *Education*	
Primary School Classrooms	50,700
Secondary Schools	459,300
Teacher Training	48,000
Education Survey	13,300
	571,300
14. *Medical Services*	
Gaberones Hospital: Phase I	81,300
Subsidies to Mission Hospitals	2,400
	83,700
15. *Ministry of Labour and Social Services*	
Botswana Training Centre	42,800
National Library Building	52,700
	95,500
17. *Community Development*	
National Sports Centre	10,000
	10,000
19. *Information*	
Gaberones Transmitter	20,000
	20,000

TABLE XII

CAPITAL EXPENDITURE ON CONTINUING AND NEW DEVELOPMENT PROJECTS (R)

CODE	SCHEME	1966/67 R	1967/68 R	1968/69 R	1969/70 R	1970/71 R
	1. INTER DEPARTMENTAL					
ID01	Shashi Complex	–	350,000	3,000,000	3,000,000	1,500,000
ID02	Hydrological Survey	–	654,100	319,800	248,600	33,800
			1,004,100	**3,319,800**	**3,248,600**	**1,533,800**
	2. WATER BRANCH					
WB01	Borehole Maintenance Units	–	91,000	61,400	12,000	12,000
WB02	Water Branch Training	–	35,500	10,600	11,300	12,300
WB03	Water Development Planning	–	50,000	50,000	40,000	40,000
WB04	Gaberones Water Supply	270,000	20,000	25,000	100,000	175,000
WB05	Lobatsi Water Supply	207,600	90,000	45,000	–	–
WB06	Mahalapye Dam	–	200,000	450,000	250,000	–
WB07	Molepolole Dam	–	60,000	60,000	–	–
WB08	Gaberones Mochudi Pipeline	–	60,000	60,000	–	–
WB09	Kanye Dam	–	–	300,000	300,000	–
WB10	Madabe Pipeline	–	60,000	–	–	–
WB11	Urban Water Supplies	–	20,000	20,000	20,000	20,000
WB12	Water Storage & Reticulation (Mahalapye, Serowe, Maun)	35,000	38,300	12,700	–	–
WB13	Rural Surface Water Supplies	–	36,300	19,100	19,200	19,300
WB14	Borehole Equipping	–	35,000	30,000	25,000	20,000
		512,600	**796,100**	**1,143,800**	**777,500**	**298,600**
	3. VETERINARY					
VE01	South West Africa Border Fences	–	104,000	–	–	–
VE02	Disease Control Fences	–	–	30,000	30,000	30,000
VE03	Bull Subsidy Scheme	10,000	10,000	10,000	10,000	10,000
VE04	Karakul Sheep Subsidy Scheme	5,000	5,000	5,000	5,000	5,000
VE05	Dorper Ram Subsidy Scheme	5,000	5,000	5,000	5,000	5,000
		20,000	**124,000**	**50,000**	**50,000**	**50,000**
	4. AGRICULTURE DEPARTMENT					
AD01	Agricultural Demonstrator Training College	235,100	205,100	–	–	–
AD02	Expansion of Extension Service	–	35,800	38,800	20,400	21,600
AD03	Agricultural Short Course Centre	–	37,800	–	–	–
AD04	Dam Construction Unit	336,400	110,200	115,700	121,500	127,600
AD05	Agricultural Broadcasting	17,300	–	–	–	–
AD06	Agricultural Census	–	16,500	63,000	–	–
AD07	Demonstration Ranches	–	14,600	18,300	18,300	3,600
AD08	Central Research Station	–	27,600	8,100	1,000	–
AD09	Crop Protection	–	20,100	4,000	–	–
AD10	Cotton Marketing	–	4,100	4,100	2,100	–
AD11	Pilot Irrigation Settlement	–	24,500	7,100	–	–
AD12	Ecological Surveys of the Kalahari	–	11,200	3,500	3,800	4,100
AD13	Mechanised Fodder & Ploughing Units	80,000	15,500	–	–	–
AD14	Bull Breeding Camps	–	–	92,500	57,500	20,600
AD15	Mobile Animal Husbandry Teams	–	–	16,800	–	16,800
AD16	Pasture Investigations	–	–	5,200	2,600	2,800
		668,800	**523,000**	**377,100**	**227,200**	**197,100**
	5. GAME					
GA01	Game Protection	–	39,000	65,100	46,500	32,200
GA02	Development of Chobe Game Reserve	–	25,300	12,000	12,800	–
		–	**64,300**	**77,100**	**59,300**	**32,200**

CODE	SCHEME	1966 67 R	1967 68 R	1968 69 R	1969 70 R	1970 71 R
6. GEOLOGICAL SURVEY						
GS01	Mineral Exploration	–	102,600	–	–	–
		–	**102,600**	**–**	**–**	**–**
7. PRINTING						
PR01	Printing Building and Equipment	–	74,500	–	6,000	–
		–	**74,500**	**–**	**6,000**	**–**
8. NATIONAL DEVELOPMENT BANK						
ND01	Borehole Repayment Scheme	166 000	200 000	200,000	200 900	200 000
ND02	Medium Term Agricultural Credit	125 000	60,000	90,000	120,000	140 000
ND03	Seasonal Agricultural Credit	–	400 000	490,000	610,000	750 000
ND04	Cooperative Credit	–	90 000	108,000	142,000	170,000
ND05	Commercial and Industrial Credit	100,000	250 000	250,000	500,000	500,000
ND06	Hainaveld Scheme	–	66,000	66,000	66,000	–
ND07	Low Cost Housing	–	375,000	–	375,000	–
ND08	Mortgage Finance Housing	–	130,000	130,000	130,000	130,000
		391,000	**1,571,000**	**1,334,000**	**2,143,000**	**1,890,000**
9. CO OPERATIVE DEVELOPMENT						
CO01	Development of Co-operatives	–	40,900	15,000	10,500	8,000
		–	**40,900**	**15,000**	**10,500**	**8,000**
10. PUBLIC WORKS						
PW01	Lobatsi Gaberones Road	–	221,000	642,000	422,000	–
PW02	Gaberones Drainage	–	90,000	30,000	30,000	30,000
PW03	Gaberones Township Roads	–	91,500	73,500	–	–
PW04	Tlokweng Drainage	–	10,000	–	–	–
PW05	Gaberones Border Road	–	–	79,000	79,000	–
PW06	North South Road	–	3,000	50,000	135,000	–
PW07	Bridges & Drainage on Main Roads	–	10,000	50,000	150,000	150,000
PW08	Township and Village Roads	–	9,000	50,000	50,000	50,000
PW09	Road Maintenance Training	–	17,100	14,800	3,600	3,200
PW10	Road Depots	–	–	53,000	48,000	50,000
PW11	Airfield Improvements	–	74,300	107,000	107,000	107,000
PW12	Gaberones Airport Survey	–	20,000	–	–	–
PW13	Mechanical Workshop	–	30,000	–	–	–
PW14	Electrification	108,700	575,000	65,000	–	–
PW15	Government Housing	647,900	679,500	37,300	94,300	44,000
PW16	Administrative Buildings	362,300	94,500	–	–	–
PW17	Meteorological Equipment	–	12,100	42,400	13,500	6,500
		1,118,900	**1,937,000**	**1,264,000**	**1,132,400**	**440,700**
11. POSTS & TELEGRAPHS						
PT01	Underground Cabling: Gaberones	–	20,000	–	–	–
PT02	Main Telephone Trunk Line	59,400	115,000	–	–	–
PT03	Teleprinter Service	–	15,000	–	–	–
PT04	Extension to Gaberones Automatic Exchange	–	40,000	–	–	–
PT05	Francistown-Maun Telephone Line	–	50,000	50,000	–	–
PT06	Mochudi-Sequani Telephone Line	–	7,500	–	–	–
PT07	Pitsani-Sedibeng Telephone Line	–	5,000	–	–	–
PT08	Tuli Block Farms Telephone Line	–	25,000	–	–	–
PT09	Extension to Lobatsi Automatic Exchange	–	–	15,000	–	–
PT10	Francistown Post Office	–	40,000	–	–	–
PT11	Maun Post Office	–	20,000	–	–	–
PT12	Post Offices (General)	3,500	14,000	–		–
		62,900	**351,500**	**95,000**	**–**	**–**

CODE	SCHEME	1966/67	1967/68	1968/69	1969/70	1970/71
		R	R	R	R	R
12. *SURVEYOR-GENERAL*						
SG01	Survey Technician Training	–	33,600	16,900	13,900	13,800
SG02	Survey Equipment	–	19,000	–	–	–
SG03	Town Mapping and Planning	–	20,600	20,100	22,800	–
		–	**73,200**	**37,000**	**36,700**	**13,800**
13. *EDUCATION*						
ED01	Francistown Secondary School	–	230,400	130,000	157,300	–
ED02	Swaneng Secondary School	–	261,600	112,400	–	–
ED03	Moeding Secondary School	–	197,000	70,000	–	–
ED04	St. Joseph's Secondary School	–	136,000	30,000	–	–
ED05	Kgari Sechele Secondary School	–	127,700	38,800	–	–
ED06	Molefi Secondary School	–	116,400	36,200	–	–
ED07	Seepapitso Secondary School	–	129,700	37,800	–	–
ED08	Francistown Teacher Training College	20,000	298,200	23,000	–	–
ED09	Lobatsi Teacher Training College	–	194,000	66,000	–	–
ED10	School Broadcasting	5,700	25,000	9,000	–	–
ED11	Primary School Teaching Aids	–	150,000	100,000	100,000	–
ED12	Secondary School Bursaries	–	36,000	46,000	58,000	70,000
ED13	Higher Education Bursaries	–	56,000	48,000	64,000	80,000
		25,700	**1,958,000**	**747,200**	**379,300**	**150,000**
14. *MEDICAL SERVICES*						
MD01	Gaberones Hospital: Phase II	15,000	157,000	39,000	12,000	6,000
MD02	Serowe Hospital	–	67,900	–	–	–
MD03	Mahalapye Health Centre	–	68,200	–	–	–
MD04	Lobatsi Hospital	–	53,600	26,100	–	–
MD05	Gaberones Health Centre	–	12,500	24,000	–	–
MD06	Francistown Hospital	–	–	74,900	54,800	–
MD07	Maun Hospital	–	–	12,800	–	–
MD08	Kasane Health Centre	–	–	14,800	–	–
MD09	Ghanzi Health Centre	–	–	2,400	–	–
MD10	Good Hope Dispensary	–	5,400	–	–	–
MD11	Shoshong Dispensary	–	–	4,000	–	–
MD12	Public Health Education	–	40,600	22,000	24,800	25,000
		15,000	**405,200**	**220,000**	**91,600**	**31,000**
15. *MINISTRY OF LABOUR AND SOCIAL SERVICES*						
LS01	Language Laboratory	–	9,800	–	–	–
LS02	Development of Botswana Training Centre	–	34,000	–	–	–
LS03	National Library	–	19,500	4,000	11,400	4,000
		–	**63,300**	**4,000**	**11,400**	**4,000**
16. *MINISTRY OF LOCAL GOVERNMENT*						
LG01	District Council Training	–	35,100	33,400	34,500	36,000
LG02	Improvement of Local Courts	–	19,000	9,400	7,300	8,200
		–	**54,100**	**42,800**	**41,800**	**44,200**
17. *COMMUNITY DEVELOPMENT*						
CM01	Community Development Field Staff	–	48,200	54,900	63,800	65,800
CM02	Community Development Training	–	77,700	27,900	45,400	21,100
CM03	Youth Service	–	42,100	39,600	33,100	3,600
CM04	Home Economics Mobile Unit	–	14,400	8,500	–	–
CM05	"Ipelegeng" (Self-Help) Scheme	138,600	106,000	–	–	–
		138,600	**288,400**	**130,900**	**142,300**	**90,500**

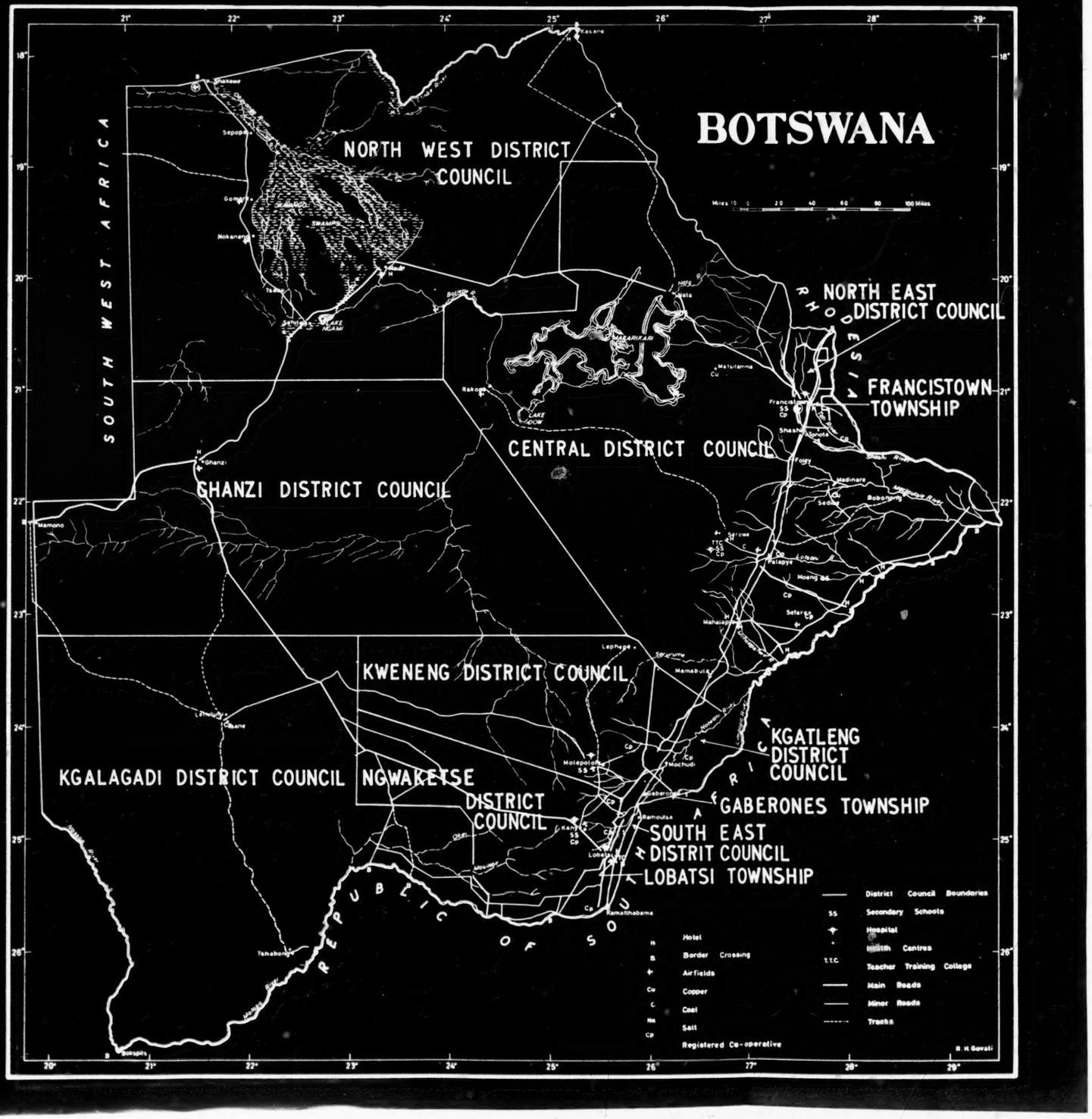
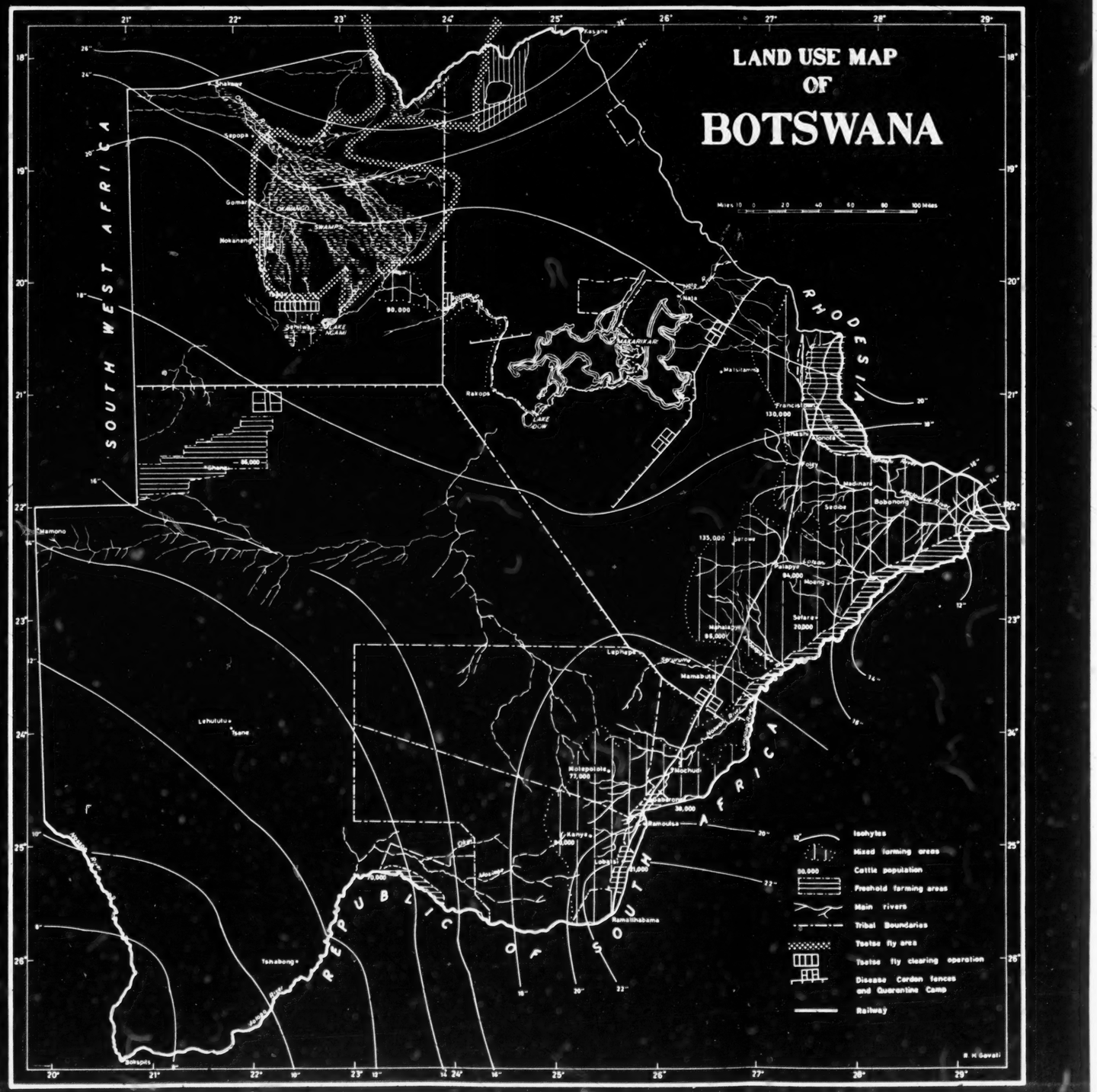
CODE	SCHEME	1966/67	1967/68 R	1968/69 R	1969/70 R	1970/71 R
18.	*MINISTRY OF HOME AFFAIRS*					
HA01	Bushman Training and Settlement	–	21,800	11,600	59,000	37,200
HA02	National Museum	–	26,000	2,000	–	–
HA03	Prison Workshops	–	7,000	600	–	–
HA04	Prison Welfare Officers	–	–	15,000	–	–
HA05	Law and Order	–	382,300	–	–	–
		–	**437,100**	**29,200**	**59,000**	**37,300**
19.	*INFORMATION*					
IN01	Film Unit	–	41,500	–	–	–
IN02	Broadcasting House	–	187,000	–	–	–
IN03	Lobatsi Transmitter	–	–	8,000	–	–
		–	**228,500**	**8,000**	**–**	**–**

TABLE XIII

RECURRENT EXPENDITURE DERIVING FROM CONTINUING AND NEW DEVELOPMENT PROJECTS (R)

CODE	SCHEME	1966/67 R	1967/68 R	1968/69 R	1969/70 R	1970/7 R
	1. *INTER-DEPARTMENTAL*					
ID02	Hydrological Survey	–	–	–	–	85,60
		–	**–**	**–**	**–**	**85,60**
	2. *WATER BRANCH*					
WB01	Borehole Maintenance Units	–	13,400	17,400	19,500	19,50
		–	**13,400**	**17,400**	**19,500**	**19,50**
	3. *VETERINARY*					
VE01	S.W.A Border Fences	–	5,000	5,500	5,000	5,00
		–	**5,000**	**5,000**	**5,000**	**5,00**
	4. *AGRICULTURE DEPARTMENT*					
AD01	Agricultural Demonstrator Training College	–	106,600	112,900	118,600	122,50
AD02	Expansion of Extension Services	–	24,100	56,100	85,800	109,80
AD03	Agricultural Short Course Centre	–	–	14,000	14,700	15,10
AD05	Agricultural Broadcasting	–	5,000	5,200	5,500	5,80
AD08	Central Research Station	–	10,800	11,100	14,000	11,60
AD09	Crop Protection	–	27,600	28,400	28,800	34,10
AD11	Pilot Irrigation Settlement	–	5,000	5,300	5,700	5,80
AD15	Mobile Animal Husbandry Teams	–	–	15,400	16,200	32,40
		–	**179,100**	**248,400**	**289,300**	**337,10**
	5. *GAME*					
GA01	Game Protection	–	6,400	27,300	46,500	76,30
GA02	Development of Chobe Game Reserve	–	3,100	6,900	11,500	15,70
		–	**9,500**	**34,200**	**58,000**	**92,00**
	6. *GEOLOGICAL SURVEY*					
GS01	Mineral Exploration	–	40,000	42,000	44,000	46,00
		–	**40,000**	**42,000**	**44,000**	**46,00**
	7. *PRINTING*	–	–	–	–	–
	8. *NATIONAL DEVELOPMENT BANK*	–	–	–	–	–
	9. *CO-OPERATIVE DEVELOPMENT*					
CO01	Development of Co-operatives	–	13,600	22,400	25,100	26,10
		–	**13,600**	**22,400**	**25,100**	**26,10**
	10. *PUBLIC WORKS*					
PW09	Road Maintenance Training	–	1,100	16,700	32,100	41,00
PW11	Airfield Improvements	–	24,000	39,000	41,000	47,00
		–	**25,100**	**55,700**	**73,100**	**88,00**

CODE	SCHEME	1966/67 R	1967/68 R	1968/69 R	1969/70 R	1970/71 R
11.	*POSTS & TELEGRAPHS*	–	–	–	–	–
12.	*SURVEYOR GENERAL*	–	–	–	–	–
13.	***EDUCATION***					
ED01	Francistown Secondary School	–	20,900	44,500	65,200	85,800
ED02	Swaneng Secondary School	–	33,000	66,000	85,500	90,000
ED03	Moeding Secondary School	–	16,500	28,500	30,000	31,500
ED04	St. Joseph's Secondary School	–	15,000	27,000	28,500	30,000
ED05	Kgari Sechele Secondary School	–	7,100	11,100	15,200	16,000
ED06	Molefi Secondary School	–	7,100	11,100	15,200	16,000
ED07	Seepapitso Secondary School	–	7,100	11,100	15,200	16,000
ED08	Francistown Teacher Training College	–	20,000	42,000	50,000	52,500
ED09	Lobatsi Teacher Training College	–	15,000	39,000	45,000	47,500
ED10	School Broadcasting	–	14,000	20,000	21,000	22,000
		–	**155,700**	**300,300**	**370,800**	**407,300**
14.	*MEDICAL SERVICES*					
MD02	Serowe Hospital	–	27,000	28,500	30,000	31,500
MD03	Mahalapye Health Centre	–	6,100	6,400	6,700	7,000
MD04	Lobatsi Hospital	–	13,000	14,300	15,600	16,900
MD05	Gaberones Health Centre	–	11,000	11,500	12,000	12,500
MD06	Francistown Hospital	–	–	18,000	19,000	20,000
MD07	Maun Hospital	–	–	300	300	300
MD08	Kasane Health Centre	–	–	300	300	300
MD09	Ghanzi Health Centre	–	–	6,000	6,400	6,800
		–	**57,100**	**85,300**	**90,300**	**95,300**
15.	*MINISTRY OF LABOUR & SOCIAL SERVICES*					
LS02	Development of Botswana Training Centre	–	13,500	14,000	14,500	15,000
		–	**13,500**	**14,000**	**14,500**	**15,000**
16.	*MINISTRY OF LOCAL GOVERNMENT*					
LG02	Improvement of Local Courts	–	10,000	18,500	19,500	20,500
		–	**10,000**	**18,500**	**19,500**	**20,500**
17.	*COMMUNITY DEVELOPMENT*					
CM01	Community Development Field Staff	–	27,200	54,400	86,400	128,700
CM03	Youth Service	–	16,600	20,800	24,800	26,100
		–	**43,800**	**75,200**	**111,200**	**154,800**
18.	*MINISTRY OF HOME AFFAIRS*					
HA02	National Museum	–	5,100	5,600	5,900	6,100
HA04	Prison Welfare Officers	–	–	4,800	5,000	5,100
HA05	Law and Order	–	71,200	118,500	124,100	130,000
		–	**76,300**	**128,900**	**135,000**	**141,200**
19.	*INFORMATION*					
IN01	Film Unit	–	13,300	14,000	14,700	15,400
IN03	Lobatsi Transmitter	–	–	1,000	1,000	1,000
		–	**13,300**	**15,000**	**15,700**	**16,400**


BOTSWANA
NORTH WEST DISTRICT COUNCIL
NORTH EAST DISTRICT COUNCIL
FRANCISTOWN TOWNSHIP
CENTRAL DISTRICT COUNCIL
GHANZI DISTRICT COUNCIL
KWENENG DISTRICT COUNCIL
KGALAGADI DISTRICT COUNCIL
NGWAKETSE DISTRICT COUNCIL
KGATLENG DISTRICT COUNCIL
GABERONES TOWNSHIP
SOUTH EAST DISTRIT COUNCIL
LOBATSI TOWNSHIP
SOUTH WEST AFRICA
REPUBLIC OF SOUTH AFRICA
Miles 10 0 20 40 60 80 100 Miles
District Council Boundaries
Secondary Schools
Hospital
Health Centres
Teacher Training College
Main Roads
Minor Roads
Tracks
Hotel
Border Crossing
Airfields
Copper
Coal
Salt
Registered Co-operative
R. H. Govati

LAND USE MAP OF BOTSWANA